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ABSTRACT

The Colorado Experience-Based Career Education (EBCE) model was tested in 1978-79 in three rural sites and one urban site utilizing both alternative and infused program approaches. (The modified Northwest Regional Educational Laboratory EBCE model focuses on exploration for grades 7-10.) Evaluation was designed to evaluate three program components (basic skills, life skills, career development) and two general program questions. Instruments used included (1) pre-post student assessment instrument (all components), (2) Adult Performance Level instrument (basic skills), (3) student interview instrument (life skills, career development), and (4) community, parent, and staff survey instruments (general program questions). Evaluation results showed a significant difference both in students' performance on a pre/post basis for all program components and between project students' and control group performance. Staff, parents, and community survey participants felt the program had strong merits and supported it. Both rural and urban locations and both infused and alternative approaches demonstrated significant improvement in student abilities. The component which analyses show made the greatest change was career development. (Appendixes, amounting to over one-half of the report, include evaluation and survey instruments and data analyses.) (YLB)

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ED195638

FINAL REPORT

Project No. 502 AH 60067
Grant No. G 08-76-00111

Colorado Experience-Based Career Exploration (7-10)

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

Jannice J. Cromwell
State Board for Community Colleges and Occupational Education
1313 Sherman Street
2nd Floor, Centennial Building
Denver, Colorado 80203

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Volume II

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COLORADO

EXPERIENCE-BASED

CAREER EXPLORATION MODEL

FINAL EVALUATION REPORT

Submitted to

Colorado State Board for Community Colleges
and Occupational Education

and

CEBCEM Project Sites

Submitted by

Glen Rask

SUMMARY

The Colorado Experience-Based Career Education model was tested in three rural and one urban site in 1978-79 utilizing both alternative and infused program approaches.

The evaluation was designed to evaluate three program components (Basic Skills, Life Skills, Career Development) as well as two general program questions. To gather data on each component and question, instruments were developed to address the objectives included in each component and question.

The "student assessment" instrument contains parts which address all project components. The instrument was administered on a pre/post basis to all students in the program. Tests were matched and a random sample was drawn from each grade and site for analysis.

The Adult Performance Level (APL) published by the American College Testing was administered in the same manner as the "student assessment." Data from this instrument were utilized in evaluating the basic skills component.

The "student interview" instrument which is unique to this evaluation was developed and utilized with a control group and random sample of students from each grade level and site. This instrument was used in evaluating the life skills and career development components.

Community survey, parent survey and staff survey instruments were developed to address general program questions. These instruments were administered as a post survey by the project director.

The results of this evaluation clearly show a significant difference (.05 level) in students' performance on a pre/post basis for all program components. The results further show a significant difference (.05 level) between project students' performance and the control group.

The general program surveys are evidence that in the opinion of staff, parents and community participants, the program has strong merits and is supported by all three groups.

While no clear distinction can be drawn between rural/urban and infused/alternative approaches both locations and approaches demonstrated significant improvement in student abilities. The evidence would tend toward rural/infused approaches being stronger, but further study is recommended.

The component which analyses shows made the greatest change was career development. Based upon this evidence it is implied that the program makes a difference in students' ability for occupational choice. The evaluator recommends further study to clarify this issue.

In conclusion, the evaluation clearly shows that CEBCE makes a difference in students' abilities related to the three program components and further implementation and study is recommended for the students of Colorado public schools.

ACKNOWLEDGEMENTS

Many have contributed to the accomplishment of this evaluation and the following subsequent report. Special recognition is due Ms. Janice Cromwell, Project Director from the State Board for Community Colleges and Occupational Education and local project coordinators in Eagle County School District, Holyoke School District, Jefferson County School District, and Rocky Ford School District.

The evaluator also wishes to acknowledge the assistance given by those who managed testing, conducted interviews, tabulated data and assisted in final preparation of the report. Your contributions to the total effort helped it fit together into a report that we are sure will be of value to those who wish to assess the merit of this project.

CONTENTS

		Page
SUMMARY		i
ACKNOWLEDGEMENTS		iii
LIST OF TABLES		vi
Chapter		
I	INTRODUCTION	1
	Purpose of the Report	1
	Description of CEBCEM	2
II	EVALUATION DESIGN	3
	Evaluation of Basic Skills Component	4
	Evaluation of Life Skills Component	4
	Evaluation of Career Development Component	4
	Instrumentation	5
	Sampling Techniques	7
	Data Collection	8
	Data Analysis	9
	Timeline of Evaluation	10
III	EVALUATION FINDINGS	11
	Basic Skills Component Findings	11
	Life Skills Component Findings	18
	Career Development Component Findings	28
	General Program Survey	32
	General Program Questions	48
IV	CONCLUSIONS AND RECOMMENDATIONS	51
	Conclusions	51
	Recommendations	55

V APPENDICES

Appendix A: Student Pre-Assessment
Appendix B: High School APL Survey
Appendix C: Report of Analysis of APL
Appendix D: Explanation of Terms and Student Interview
Appendix E: Analysis of Student Assessment
Appendix F: Scoring of Oral Interview Evaluator of Life Skills and Career Development Areas
Appendix G: Staff Opinion Survey
Appendix H: Comments on Staff Opinion Survey
Appendix I: Parent Opinion Survey
Appendix J: Comments on Parent Opinion Survey
Appendix K: Community Survey
Appendix L: Comments on Community Survey
Appendix M: Analysis of Rural/Urban and Infusion/Alternative Programs

LIST OF TABLES

TABLE		PAGE
1	Sampling Techniques	1
2	Data Collection Timeline	8
3	Data Analysis	9
4	Student Assessment	12
5	Analysis of Total Project-Section II, Student Assessment.	14
6	Student Assessment-Part IV, Application of Academic Skills	15
7	APL Results by School and Grade Level	17
8	Analysis of Student Assessment-Section 1	19
9	Analysis of Student Assessment-Section 1, Total Program	20
10	Analysis of Student Assessment-Section 3, by School and Grade	22
11	Analysis of Student Assessment-Section 3, Total Project	23
12	Analysis of Student Interviews	25
13	Comparative Analysis of Student Interviews by Control Group and Project Groups	26
14	Comparative Analysis of Student Interviews by Control Group and Project Groups	27
15	Analysis of Student Assessment-Part IV, Section 1, Sources of Occupational Information	29
16	Analysis of Student Assessment-Part IV, Section 2, Factors in Considering an Occupation	30
17	Analysis of Student Assessment-Part IV, Section 3, Occupations and Skills	31

LIST OF TABLES, Continued

TABLE		PAGE
18	Rank of Learning Activity Importance	34
19	Rank of Learning Activity Effectiveness	35
20	Response to Staff Survey: How Helpful Has EBCE Been? .	36
21	Analysis of Responses to Parent Survey	38
22	Response to Parent Survey Questions	39
23	Community Survey Participation	41
24	Community Survey - Activity Importance	42
25	Community Survey - Learning at Site	44
26	Community Response - Student Benefit	45
27	Community Survey - Program Strengths	47
28	Community Survey - Program Weaknesses	47

CHAPTER I

INTRODUCTION

Purpose of the Report

It is the intent of this report to describe evaluation activities conducted relative to the Colorado Experience-Based Career Exploration Model (CEBCEM) in four pilot sites and to report results of evaluation relative to the objectives set forth in the project proposal.

This report is intended for the use of the project sites and the State Board for Community Colleges and Occupational Education in assessing the impact and value of CEBCEM to students in various school settings in Colorado. The report is property of the Colorado State Board for Community Colleges and Occupational Education and may be used at their discretion.

The report is organized into four chapters plus appendices. Chapter I--"Introduction"--contains a statement of purpose and a description of CEBCEM. Chapter II--"Evaluation Design"--contains the overall design of the evaluation, development and selection of instruments, sampling and data gathering techniques, data analysis, and timeline of evaluation. Chapter III--"Evaluation Findings"--contains the results and findings of the evaluation. Chapter IV--"Conclusions and Recommendations."

Description of CEBCEM

Experience-Based Career Education was originally developed by four regional educational laboratories. After examination of the four models, Colorado decided to implement a modified Northwest Regional Educational Laboratory EBCE Model. Colorado Experience-Based Career Exploration focuses on exploration for seventh through tenth grade students utilizing the modified EBCE curriculum base.

This CEBCE model emphasizes procedures for coordinating basic skills, life skills and career development through integration of classroom experiences with practical application and experiences in the community.

CHAPTER II

EVALUATION DESIGN

The evaluation plan here described relates to third party evaluation only and does not include internal or director evaluations which have subsequently been developed.

The plan for evaluation addresses the three components identified in the project proposal (Basic Skills, Life Skills, and Career Development). In addition, general program implementation questions were studied to provide an overall view of project outcomes.

General Program Implementation Questions:

1. Is there a difference between rural and urban programs?
2. Is there a difference between infused and alternative approaches to implementation?
3. Are students better prepared for career decision making as a result of having been involved in CEBCEM?

The three general program questions were addressed through comparative analysis between sites and control groups utilizing all instruments designed and adopted for this evaluation. Parent, community and EBCE staff opinion surveys were also used to address the general program questions.

Evaluation of Basic Skills Component

The component of basic skills was evaluated primarily as those skills are necessary for career performance and for skills application in careers and courses.

This component was tested through the use of two measures. The "Student Assessment" administered pre/post was used to determine recognition of basic skills application. The "Adult Performance Level" was used to determine a student's ability to perform basic skills.

Evaluation of Life Skills Component

The life skills component was evaluated based upon student outcomes as measured by the "Student Interview" and "Student Assessment" instruments.

The student interview was conducted with a random sample of students at each project site and with a random sample of students from a control school. A comparative analysis was conducted between project sites and between project sites and the control school.

The student assessment was administered on a pre/post basis and comparisons were made within and between groups.

Evaluation of Career Development Component

The evaluation of this component was more difficult that the other components because elements of career development are found in all components evaluated.

The primary means of evaluation of this component was from student assessment, conducted pre/post and student interviews.

Appropriate analyses were made in each portion of this evaluation and a growth matrix was developed for the overall evaluation of the component.

Instrumentation

Instruments utilized in this evaluation included commercially produced instruments, adaptations of instruments utilized by the Northwest Regional Education Laboratory and instruments created specifically for this project. Because of the diversity and use of these instruments, the evaluator deemed it necessary to provide here a brief description of each instrument and its use in this evaluation.

Adult Performance Level (APL), American College Testing Program, Iowa City, Iowa

The Adult Performance Level Program is an objective-based assessment program designed to measure life skills proficiency of both young and mature adults.

The content areas measured by the APL include Community Resources, Occupational Knowledge, Consumer Economics, Health, Government and Law.

Skill areas measured in conjunction with the content areas include Identification of Facts and Terms, Reading, Writing, Computation, and Problem Solving. In analysis a composite score is given which represents the student's level of mastery of all content and skill areas.

Two tests of reliability have been made on the APL utilizing eleventh grade students yielding .85 for the Kuder-Richardson and .85 for the split-half test.

Readability tests on the instrument have established a grade equivalent level of fifth grade.

The APL was utilized in this evaluation as part of the evaluation of the Basic Skills Component.

CEBCEM Student Assessment

The student assessment instrument was developed by the evaluator utilizing input from instruments developed by the Northwest Regional Educational Laboratory. The instrument was designed to provide an overall measure of the project student outcomes. Validity of the instrument was accomplished by means of expect review. A review panel of five people with recognized expertise in Experience-Based Career Education was utilized for this purpose.

The split-half test of reliability was used to determine reliability and a score of .79 was determined using a sample group of 29 students.

CEBCEM Student Interview

This instrument and technique is unique for evaluation and was developed specifically for this project. It was decided in planning the evaluation that traditional "pencil and paper" tests may not accurately measure changes in a student's ability to apply life skills and career development concepts.

The instrument and interview utilizes a job interview format where the student is the job applicant and the evaluation interviewer is the job interviewer.

Following development of the instrument and training of interviewers a pilot test was conducted on December 13, 1978 with 24 students. The data from the pilot test was used to establish reliability and validity. No need for major revision was found in either the instrument or technique.

CEBCE--Parent Opinion Survey
Staff Opinion Survey
Community Opinion Survey

These three instruments were developed and administered by the project director. Data from the survey were delivered to the project evaluator for inclusion in the overall evaluation.

Sampling Techniques

Sampling techniques varied by component being evaluated and instrument being utilized. Presented in Table 1 is sample technique and sample size by instrument for both the experimental group and control group.

TABLE 1. Sampling Techniques.

Instrument	Experimental Technique	Size	Control Technique	Size
APL	Total Population		National Norms	
Student Assessment	Total Population Matched Scores		Random Selection	29
Student Interview	Random Selection Stratified By Grade Level	5 per grade level per site	Random Selection Stratified By Grade	24
CEBCE				
Parent Survey	Total Population		None	
Staff Survey	Total Population			
Community Survey	Total Population			

Data Collection

Based upon the evaluation design, data was collected when appropriate to the design and instrument. As much as possible data was collected from both experimental and control groups and all sites simultaneously.

Table 2 shows instrument and project time at which data was gathered.

Table 2. Data Collection Timeline.

Instrument	Time
APL	Post-test in last week.
Student Assessment	Pre-test in second week. Post-test in last two weeks.
Student Interview	Post-test in last two weeks.
CEBCE Parent Survey	Post-test upon completion.
Staff Survey	Post-test upon completion.
Community Survey	Post-test upon completion.

Data Analysis

All data analysis was determined based upon appropriateness of the analysis to the type of instrumentation evaluation design and evaluation questions.

Shown in Table 3 are data analyses utilized by instrument.

Table 3. Data Analysis.

Instrument	
APL	Mean scores by grade level by site Percent of mastery
Student Assessment	Frequency distribution T-test of significant difference pre/post T-test of significant difference post-test by site T-test of significant difference pre/post by component
Student Interview	T-test of significant difference between sites and control group T-test of significant difference between sites
CEBCE Parent Survey	Frequency distribution Mean scores
Staff Survey	Frequency distribution
Community Survey	Frequency distribution Mean scores

Timeline of Evaluation

Activity	
Preliminary Evaluation Plan	September, 1978
Instrument Review/NWREL	September/October, 1978
Development of CEBCE Student Assessment Instrument	October/November, 1978
Development of CEBCE Student Interview Instrument	October/November, 1978
Pilot Test Instruments	December, 1978
Draw Samples	December, 1978
Conduct Student Interviews	January, April, May, 1979
Conduct Student Assessments	January and May, 1979
Administer APL	May, 1979
Compile Data	June, 1979
Analysis of Data	July/August, 1979
Development of Final Report	September/October, 1979

CHAPTER III

EVALUATION FINDINGS

The findings of this evaluation are here reported by program components (Basic Skills, Life Skills, Career Development). In addition, the findings regarding the general program implementation questions outlined in Chapter II are here reported.

A. Basic Skills Component Findings

The "Student Assessment" (see Appendix A) administered pre/post and the "Adult Performance Level" (see Appendix B) administered as a post-test were used to evaluate this component. The findings are here reported separately since they measure two aspects of the component.

1. Student Assessment:

The instrument was administered to all students involved in the project present in schools that day. Pre-tests and post-tests were matched for all students. Only students involved in both pre and post-testing were included in the random sample drawn for analysis. A sample of 15 was drawn from each grade level for each site. This sample size is adequate for the analysis intended.

To determine if a difference existed between pre-test scores and post-test scores related to Basic Skills, the

t-test was utilized to compare scores on Section II of the instrument. Frequencies and t-test were utilized to compare scores on Section IV of the instrument.

The following table contains comparison of pre/post scores for Section II of the student assessment by school and grade level. A lower score indicates a higher level of application of skills (see Appendix E for complete analysis).

Table 4. Student Assessment.

School	Grade	Pre-Test Mean	Post-Test Mean	T-value
Alameda	9	42.07	40.0	1.51
Wheatridge	9	37	35.47	3.80*
Holyoke	7	43.29	42.00	1.31
	8	42.07	41.00	.69
	9	41.6	40.53	.927
	10	41.33	39.00	2.40*
Minturn	7	42.53	43.47	.61
	8	42.33	39.60	1.99
Battle Mountain	9	39.4	38.53	1.47
	10	39.13	37.87	1.09
Rocky Ford	7	42.4	41.2	1.61
	8	37.53	40.2	1.46
	9	38.4	39.5	1.14
	10	36.66	39.93	1.58

T=2.13 Critical value .05 level of significance.

It is noteworthy that while only two grade levels have t-values that exceed the critical value at the .05 level in ten cases of 14 there is improvement reflected in the mean scores.

Analysis to compare all pre/post scores on Part II was completed to determine if significant improvement was made by students in the entire program.

Table 5 includes the combination of differences by school and level to provide a composite analysis for the project.

It was found that a significant difference exists between the pre and post tests for the total project on Section II of the Student Assessment (T=2.495 which exceeds the critical value of 1.96 at the .05 level of significance).

In analyses of all items included in Part IV of the Student Assessment the evaluator found little value in determining differences by school and grade level. Therefore, Table 6 contains number of appropriate responses by school and grade for both the pre-test and post-test; the mean number of appropriate responses per participant for both pre-test and post-test; and the t-test for the total group.

The t-test resulted in a t-value of 91.43 which exceeds the 1.96 critical value at the .05 level of significance.

Table 5. Analysis of Total Project - Section II, Student Assessment.

N=209

School	Grade	D	D^2
Alameda	9	31	457
Wheatridge	9	68	607
Holyoke	7	21	239
	8	14	496
	9	16	296
	10	35	279
Minturn	7	12	370
	8	41	505
Battle Mountain	9	23	261
	10	19	310
Rocky Ford	7	21	187
	8	-40	800
	9	-19	281
	10	-49	1053
		$\sum D=193$	$\sum D^2=6141$

$\bar{D} = .923$

$\sum d^2 = 6141 - \frac{193^2}{209} = 5962.78$

$S_{\bar{D}} = \sqrt{\frac{5962.78}{(209)(208)}} = .37$

$T = \frac{.923}{.37} = 2.495$

T of 1.96 or greater at .05 level

Table 6. Student Assessment - Part IV, Application of Academic Skills.

N=15 each grade
Total N = 209

School	Grade	Pre-Test Responses Number	Pre-Test Responses Mean	Post-Test Responses Number	Post-Test Responses Mean	D	D^2
Alameda	9	22	1.47	33	2.20	11	121
Wheatridge	9	18	1.20	34	2.27	16	256
Holyoke	7	7	.46	28	1.87	21	441
	8	11	.73	27	1.80	16	256
	9	13	.87	38	2.53	25	625
	10	15	1.00	34	2.27	19	361
Minturn	7	14	.93	38	2.53	24	576
	8	12	.80	46	3.07	34	1156
Battle Mountain	9	17	.89	36	2.40	19	361
	10	24	1.60	39	2.60	15	225
Rocky Ford	7	9	.60	21	1.40	12	144
	8	8	.53	31	2.07	17	289
	9	14	.93	38	2.53	24	576
	10	17	1.13	41	2.73	24	576
						$\{D=267$	$\{D^2=5583$

$\overline{D} = 1.28$

$\{d^2 = 5583 - \frac{267^2}{209} = 5241.90$

$S_{\overline{D}} = \sqrt{\frac{5241.90}{(209)\ (208)}} = .014$

$T = \frac{1.28}{.014} = 91.43$

2. Adult Performance Level (APL)

In the research design it was determined that the APL would provide an indication of students' application of academic skills to "life situations" since the literature indicates a high correlation between APL scores and California Test of Basic Skills. The values of the APL in this evaluation are that it would indicate by mastry level content areas which needed additional work and if compared to a control group would indicate growth as a result of the program.

The project director provided instruments and administration instructions to each program site and a control group. Each site administered the instrument to all participants at completion of the project and returned the data to the project director for analysis.

The project director analyzed the data and returned the results to the project sites (Appendix C).

For comparison of the project participants to a control group the instruments and data were handled in the same manner as for the test groups. After completion of the project it was found that the students selected for the control group had been part of a consumer economics class. This contamination invalidated the control group and left no group for the evaluator to compare against.

As a result of the lack of a valid control group, the evaluator has here reported results of the APL in Table 7,

but will not attempt to draw implications of change based upon the results of the APL. The percent mastery indicates the level of mastery of adult performance skills.

Table 7. APL Results by School and Grade Level.

School	Grade	N	Mean	Standard Deviation	Percent Mastery
Eagle Valley	7	44	22.53	4.60	15
	8	55	24.70	5.68	29
	9	62	25.36	6.60	43
	10	61	21.34	8.00	27
Minturn	7	56	22.12	5.15	16
	8	39	23.84	5.12	28
Rocky Ford	7	102	21.52	6.09	15
	8	102	22.08	5.95	19
	9	124	22.44	6.29	20
	10	91	24.12	5.61	29
Holyoke	7	45	29.32	5.36	33
	8	51	29.83	5.12	49
	9	38	27.15	5.54	68
	10	55	24.79	6.10	69
Alameda	9	75	29.83	4.53	68
Wheatridge	7	14	30.07	2.67	85
	8	17	25.17	8.00	41
	9	13	24.46	6.71	38

B. Life Skills

The "Student Assessment" instrument, Section 1, dealing with life skills preparation and Section III, dealing with attitudes both relate to life skills component. In addition, the entire "student interview" (see Appendix D) instrument previously described relates to student's ability to relate life skills to work situations.

The results are here reported as they relate to instruments described above.

1. Student Assessment

The administration of the instrument and sample selection have previously been described. Therefore, here presented are only the results of the analysis of the data gathered.

Table 8 contains results of analysis of data utilizing the t-test pre/post on Section 1 of the instrument by school and grade level (for complete analysis see Appendix E).

A lower mean score indicates higher level of preparedness.

Five grade levels at three different schools showed significant change. However, mean scores improved in 12 of the 14 cases.

Analysis of Section 1 for the total program involved computing differences between pre-test and post-test scores for all participants and utilizing the t-test determining if significant differences exist. Table 9 contains differences and results of the t-test.

A t-value of 4.86 was found which exceeds the critical value of 1.96 for the .05 level of confidence.

Table 8. Analysis of Student Assessment - Section 1.

N=15 per grade level

School	Grade	Pre-Test Mean	Post-Test Mean	T-Value
Alameda	9	25.33	22.13	2.04
Wheatridge	9	23.13	24.13	.50
Holyoke	7	22.40	22.13	.09
	8	26.20	24.40	1.78
	9	24.13	20.80	3.14*
	10	23.87	22.93	.53
Minturn	7	28.07	28.47	.40
	8	24.80	24.40	.68
Battle Mountain	9	22.07	18.06	2.79*
	10	20.07	19.93	.10
Rocky Ford	7	26.27	22.53	2.64*
	8	27.80	24.13	1.50
	9	26.2	21.73	3.04*
	10	26.67	21.6	3.53*

*.05 level of significance T = 2.13

Table 9. Analysis of Student Assessment - Section 1, Total Program.

N=209

School	Grade	D	D^2
Alameda	9	48	674
Wheatridge	9	-17	1098
Holyoke	7	2	464
	8	27	261
	9	40	258
	10	14	664
Minturn	7	- 6	207
	8	18	682
Battle Mountain	9	51	487
	10	2	360
Rocky Ford	7	56	628
	8	58	1620
	9	67	755
	10	76	818
		$\sum D=436$	$\sum D^2=8976$

$\bar{D} = 2.09$

$\sum d^2 = 8976 - \frac{436^2}{209} = 8066.45$

$S_{\bar{D}} = \sqrt{\frac{8066.45}{(209)\ (208)}} = .43$

$T = \frac{2.09}{.43} = 4.86$

Section 3 of the Student Assessment also relates to the Life Skills component. The 15 items in this section reflect student attitudes toward life skills and career development. Table 10 includes results of data analysis for Section 3 by school and grade level.

Four grade levels in three schools showed significant change. It is of interest to note the amount of change at Minturn Middle School.

To test for change in Section 3 for the total project differences were calculated for all 209 students and the t-test applied. Results of this analysis are found in Table 11. A t-value of 4.19 was found which exceeds the critical value of 1.96 for the .05 level of significance.

2. Student Interview

The student interview instrument was developed and field tested as described in Chapter I. Interviews were conducted with a random sample of students from each project site and a control group randomly selected from Windsor Public Schools. Scores for all students are reported in Appendix F. In use of the Student Interview to assess change in the Life Skills component, all students were interviewed at completion of the project. The scores were recorded and analysis included calculation of the mean and standard deviation for each grade and school as well as the total project. The t-test for independent samples was then used to determine if project students' scores were significantly different from the control group.

Table 10. Analysis of Student Assessment - Section 3, by School and Grade.

N=15 per grade level

School	Grade	Pre-Test Mean	Post-Test Mean	T-Value
Alameda	9	43.13	42.73	.629
Wheatridge	9	42.33	44.13	1.496
Holyoke	7	38.43	42.86	2.57*
	8	42.93	43.13	.24
	9	44.27	45.06	.714
	10	43.53	42.00	1.65
Minturn	7	39.07	44.46	3.63*
	8	39.07	42.40	3.74*
Battle Mountain	9	40.27	41.93	.54
	10	41.00	43.20	1.36
Rocky Ford	7	40.40	40.33	.039
	8	37.67	42.2	2.13*
	9	39.27	41.07	1.62
	10	39.93	41.33	.853

* .05 level of significance T = 2.13

Table 11. Analysis of Student Assessment - Section 3, Total Project.

N=209

School	Grade	D	D^2
Alameda	9	10	244
Wheatridge	9	-29	403
Holyoke	7	-66	844
	8	- 5	413
	9	-12	273
	10	25	253
Minturn	7	-79	859
	8	-50	1152
Battle Mountain	9	-14	617
	10	-33	625
Rocky Ford	7	1	615
	8	-68	1268
	9	-27	309
	10	-21	593
		$\{D=-368$	$\{D^2=8468$

$\bar{D} = 1.76$

$\{d^2 = 8468 - \frac{368}{209} = 7820.04$

$S_{\bar{D}} = \sqrt{\frac{7820.04}{(209)(208)}} = .42$

$T = \frac{1.76}{.42} = 4.19$

Table 12 contains mean standard deviation and variance for each school and grade level tested.

To determine if a significant difference exists between the control group and project groups, the t-test for two independent samples was used between the control group and each project group. The calculations and results are shown in Table 13. Three of the four schools show significant improvement in scores compared to the control group.

To determine if a significant difference exists between the control group and all project groups a t-test for two independent samples was again calculated. The results of this test are shown in Table 14. A t-value of -10.19 was found which exceeds the critical value of 1.96 for significance at the .05 level.

Table 12. Analysis of Student Interviews.

School	Grade	N	Mean	Standard Deviation	Variance
Control	7	4	37	3.67	8.50
	8	5	42.6	9.97	79.44
	9 & 10	9	55.22	11.26	112.84
	Total	18	47.67	12.23	141.33
Rocky Ford	7	5	55.6	5.13	21.04
	8	5	45.0	2.12	3.6
	9 & 10	10	46.4	8.75	68.84
	Total	20	48.35	7.84	58.43
Holyoke	7	5	36.6	7.5	45.04
	8	5	62	8.34	55.6
	9 & 10	10	48	12.08	131.4
	Total	20	48.65	13.45	171.93
Eagle Valley (Minturn and Battle Mountain)	7	5	54.4	6.5	33.84
	8	5	49.8	5.76	26.56
	9 & 10	10	62.8	9.33	78.36
	Total	20	57.45	9.49	85.55
Wheatridge (1-79)	9	10	54.5	9.79	86.25
(4-79)	9	6	57.83	7.36	45.14
Alameda (1-79)	9	10	41.8	10.36	96.56
	9	7	61.71	7.34	46.20
Jefferson County	9	33	52.78	11.69	132.4

Table 13. Comparative Analysis of Student Interviews by Control Group and Project Groups.

Schools: Control and Rocky Ford

$$T = \frac{M_1 - M_2}{Sm_1 - Sm_2} = \frac{47.67 - 48.35}{2.88 - 1.75} = -.604$$

Critical value T=2.02 at .05 level - df = 36

Result: No significant difference.

Schools: Control and Holyoke

$$T = \frac{M_1 - M_2}{Sm_1 - Sm_2} = \frac{47.67 - 48.65}{2.88 - 3.00} = -8.17$$

Critical value T=2.02 at .05 level - df = 36

Result: A significant difference exists.

Schools: Control and Eagle Valley

$$T = \frac{M_1 - M_2}{Sm_1 - Sm_2} = \frac{47.67 - 57.45}{2.88 - 2.12} = -12.87$$

Critical value T=2.02 at .05 level - df = 36

Result: A significant difference exists.

Schools: Control and Jefferson County

$$T = \frac{M_1 - M_2}{Sm_1 - Sm_2} = \frac{47.67 - 52.78}{2.88 - 2.03} = -6.01$$

Critical value T=2.01 at .05 level - df = 49

Result: A significant difference exists.

Table 14. Comparative Analysis of Student Interviews by Control Group and Project Group.

Control Group and All Project Groups:	$T = \frac{M_1 - M_2}{Sm_1 - Sm_2} = \frac{47.67 - 51.95}{2.88 - 2.46} = -10.19$	
	Critical value T=1.96 at .05 level	df = 109

C. Career Development Component

Since each of the evaluation instruments involve aspects of career development and each has been analyzed as appropriate to components of Basic Skills and Life Skills, it was determined that here reported would be those components of the evaluation that relate only to career development.

1. Student Assessment

Part IV of the student assessment contains three sections which relate directly to career development. Section I requires the participant to list sources of occupational information, Section 2 requires the participant to list factors to consider in choosing an occupation, and Section 3 requires the participant to name occupations and list necessary skills for that occupation.

Analysis of Sections 1, 2 and 3 of Part IV are included in Tables 15, 16, and 17 respectively, by school and grade level. Only appropriate responses were tabulated for each participant on each section. As in previous analysis of sections of Part IV, only the number of appropriate responses, mean and difference by school and grade for pre-test and post-test are presented with the t-test for the total group.

The analysis of Section 1 items regarding sources of occupational information revealed a significant difference at the .05 level (T=3.46 exceeds the critical value T=1.96).

The analysis of Section 2, factors in considering an occupation, revealed a significant difference between pre-test and post-test at the .05 level (T=3.10 exceeds the critical value T=1.96).

Table 15. Analysis of Student Assessment - Part IV, Section I
Sources of Occupational Information

N=209

School	Grade	Pre-Test Responses Number	Pre-Test Responses Mean	Post-Test Responses Number	Post-Test Responses Mean	D	D^2
Alameda	9	62	4.13	93	6.2	31	961
Wheatridge	9	58	3.87	74	4.93	16	256
Holyoke	7	41	2.73	87	5.8	46	2116
	8	43	2.87	73	4.87	30	900
	9	64	4.27	97	6.47	30	900
	10	61	4.07	104	6.93	43	1849
Minturn	7	58	3.87	72	4.8	14	196
	8	56	3.73	65	4.33	9	81
Battle Mountain	9	68	4.53	79	5.27	11	121
	10	72	4.8	102	6.8	30	900
Rocky Ford	7	47	3.13	63	4.2	16	256
	8	59	3.93	69	4.6	10	100
	9	70	4.67	92	6.13	22	484
	10	67	4.47	96	6.4	29	841
						$\sum D=337$	$\sum D^2=9961$

$\overline{D} = 1.61$

$\sum d^2 = 9961 - \frac{337^2}{209} = 9417.61$

$S_{\overline{D}} = \sqrt{\frac{9417.61}{209\ (208)}} = .465$

$T = \frac{1.61}{.465} = 3.46$

Table 16. Analysis of Student Assessment - Part IV, Section 2
Factors in Considering an Occupation.

N=209

School	Grade	Pre-Test Responses Number	Pre-Test Responses Mean	Post-Test Responses Number	Post-Test Responses Mean	D	D^2
Alameda	9	43	2.87	45	3.0	2	4
Wheatridge	9	49	3.27	57	3.8	8	64
Holyoke	7	46	3.07	51	3.4	5	25
	8	51	3.4	58	3.87	7	49
	9	50	3.33	72	4.8	22	484
	10	61	4.07	77	5.13	16	256
Minturn	7	38	2.53	53	3.53	15	225
	8	44	2.93	51	3.4	7	49
Battle Mountain	9	56	3.73	62	4.13	6	36
	10	61	4.07	64	4.27	3	9
Rocky Ford	7	41	2.73	47	3.13	6	36
	8	47	3.13	51	3.4	4	16
	9	46	3.07	73	4.87	27	729
	10	52	3.47	68	4.53	16	256
						$\sum D=144$	$\sum D^2=2238$

$$\bar{D} = .689$$

$$\sum d^2 = 2238 - \frac{144^2}{209} = 2138.78$$

$$S_{\bar{D}} = \sqrt{\frac{2138.78}{209\ (208)}} = .222$$

$$T = \frac{.689}{.222} = 3.10$$

Table 17. Analysis of Student Assessment - Part IV, Section 3
Occupations and Skills

N=209

School	Grade	Pre-Test Responses Number	Mean	Post-Test Responses Number	Mean	D	D^2
Alameda	9	34	2.27	62	4.13	28	784
Wheatridge	9	39	2.60	54	3.60	15	225
Holyoke	7	14	.93	32	2.13	18	324
	8	26	1.73	43	2.87	17	289
	9	31	2.07	51	3.40	20	400
	10	42	2.80	57	3.60	15	225
Minturn	7	27	1.80	46	3.07	19	361
	8	34	2.27	59	3.93	25	625
Battle Mountain	9	45	3.00	67	4.47	22	484
	10	48	3.20	81	5.40	33	1089
Rocky Ford	7	31	2.07	63	4.20	32	1024
	8	43	2.87	59	3.93	16	256
	9	47	3.13	67	4.47	20	400
	10	56	3.73	73	4.87	17	289
						$\sum D=297$	$\sum D^2=6775$

$\overline{D} = 1.42$

$\sum d^2 = 6775 - \frac{297^2}{209} = 6352.95$

$S_{\overline{D}} = \sqrt{\frac{6352.95}{209\ (208)}} = .382$

$T = \frac{1.42}{.382} = 3.72$

Analysis of Section 3, Occupations and Skills, revealed a significant difference between pre-test and post-test at the .05 level (T=3.72 exceeds the critical value T=1.96).

D. General Program Surveys

1. General Program Surveys

It was decided to report results of Community, Parent and Staff surveys as part of the general program questions since they encompass all aspects of the project. They will here be addressed separately for clarity of reporting.

a. Staff Opinion Survey

The Staff Opinion Survey (see Appendix G) was developed and administered by the CEBCE coordinator. The survey was distributed to all CEBCE project staff at the completion of the project.

Return on the survey by site was as follows:

Jefferson County	2
Eagle Valley	11
Rocky Ford	4
Holyoke	4
Total	21

The small return rate makes comparison between groups impractical. However, the combination of responses from all project sites provides sufficient numbers for interpretation regarding the total program.

Staffs were asked in the survey three general questions. How important were learning activities? How effective were learning activities? How helpful has EBCE been?

They were then asked to respond to a series of items related to the general questions. Table 18 contains response mean scores ranked from most important to least important to the question, How important were learning activities?

Table 19 contains response mean scores ranked from most effective to least effective in response to the question, How effective were learning activities?

Table 20 contains response mean score and rank to items relative to the question, How helpful has EBCE been?

The response to these items provide a base for evaluation of the program from the staff point of view.

In addition to the three specific questions, the staff was given the opportunity to respond to open-ended questions. Many of these comments have value in gaining a general perspective of staff opinions regarding CEBCE. These comments are included as Appendix H.

Table 18. Rank of Learning Activity Importance.

Rank	Activity	Mean	n
1	Guidance	4.44	16
2	Student Accountability	4.43	16
3	Individual Career Exploration	4.33	15
4	Competencies	4.19	16
5	Career Exploration	4.16	19
6	Student Orientation	4.13	16
7	Community Internship	3.82	11
8	Mini-Units	3.81	16
9	Community Seminar	3.81	16
10	Individual Projects	3.64	14
11	Student Journal	3.36	14
12	Media Reviews	3.25	12
13	Pre-Written Projects	3.25	12
14	Negotiating	3.22	9

Table 19. Rank of Learning Activity Effectiveness.

Rank	Activity	Mean	n
1	Community Internship	4.0	17
2	Individual Career Exploration	3.86	14
3	Community Seminar	3.81	16
4	Individual Projects	3.80	15
5	Pre-Written Projects	3.76	17
6	Negotiating	3.75	16
7	Guidance	3.74	19
8	Career Explorations	3.73	15
9.5	Student Accountability	3.61	18
9.5	Competencies	3.61	18
11	Student Journal	3.60	15
12.5	Mini-Units	3.44	16
12.5	Student Orientation	3.44	18
14	Media Reviews	3.08	12

Table 20. Response to Staff Survey: How Helpful Has EBCE Been?

Item	Total	n	Mean	Rank
Understand Themselves	75	19	3.95	1
Applied Problem Solving	73	19	3.84	2
Relate Interests and Careers	68	18	3.78	3
Work Cooperatively	63	17	3.71	4
Resources for Information	68	19	3.58	5
Use Information from Experience	67	19	3.53	6
Basic Skills Required for Job	66	19	3.47	7
Take Responsibility	62	18	3.44	8
Society Values and World of Work	65	19	3.42	9
Feel Prepared for Responsibility	58	17	3.41	10
Understand the Democratic Process	61	18	3.39	11
Open to Ideas and Values	64	19	3.37	12
Communicate Comfortably	63	19	3.32	13
Improve Oral Communication	56	18	3.11	14.5
Improve Written Communication	56	18	3.11	14.5
Confidence in Basic Skills	59	19	3.10	16
Solve Problems Logically	52	18	2.89	17
Improve Reading	48	18	2.67	18
Improve Math	47	18	2.61	19

b. Parent Opinion Survey

The parent survey was administered to parents of participants by project staff at conclusion of the project (see Appendix I).

Returned surveys by project site were as follows:

Eagle Valley	7
Holyoke	6
Rocky Ford	3
Jefferson County	29

The number of surveys returned do not provide sufficient numbers to allow analysis by project site. Therefore, all surveys were combined for the project. Results by statement and mean score for items of Section 1 of the parent survey are included in Table 21. Parents were asked to respond to items on a five-point scale with one (1) being much worse and five (5) much better.

In addition to the formal questions included in the parent survey an opportunity was given for parents to respond to an open-ended question with comments. The comments provide additional insight into parents' opinions regarding CEBCE in general. These comments are included as Appendix J.

Table 21. Analysis of Responses to Parent Survey.
(N=45)

Item	Statement	Mean
1	How well do you feel the Career Education Program compares overall with the past school experiences of your daughter or son?	3.49
2	How well do you think your son or daughter likes the Career Education Program compared with past school experiences?	3.80
3	In comparison with past years how much opportunity has your daughter or son had for learning about careers?	3.76
4	What effect has Career Education had on helping your son or daughter form career plans?	3.67
5	In comparison with previous years how much opportunity did the Career Education Program provide for your son or daughter in practical living skills (e.g., how to balance a checkbook) in addition to basic skills.	3.68
6	In comparison with past years how motivated is your daughter or son to learn?	4.05
7	Before the start of the Career Education Program, how often did your son or daughter talk to you about what was going on in their classes?	3.38
8	How often does your son or daughter talk to you about what's going on in their classes now?	3.95

In Section 2 of the survey parents were asked to respond to five questions regarding the program in general. Table 22 includes questions asked -- highest responses and frequency.

Table 22. Response to Parent Survey Questions.

Item	Statement/Response	Frequency
9	What are the greatest weaknesses of the ECC program.	
	--Some students can't handle the freedom.	12
	--Lack of variety of job sites.	12
	--Students not receiving sufficient training in basic skills.	10
10	Greatest strengths of the ECC program.	
	--Students learn about a variety of careers.	35
	--Program provides guidance in career planning.	25
	--Students learn about real life situations.	21
11	What changes have you noticed in your student as a result of participation in ECC.	
	--Better understanding of jobs.	25
	--More realistic attitudes towards life, work, etc.	20
	--Greater maturity or self-direction.	18
12	What negative changes, if any, have you noticed in your students as a result of ECC.	
	--Less interested in education.	26
13	What types of knowledge, skills, or attitudes has your student acquired in ECC that you feel they would not have received in "regular school programs."	
	--First-hand knowledge of one or more business/ occupations.	32
	--Self-discipline and responsibility.	21

c. Community Opinion Survey

The community survey (see Appendix K) was administered by the project staff at each site at the completion of the project.

Return on the survey by site was as follows:

Jefferson County	22
Eagle Valley	19
Rocky Ford	23
Holyoke	23
Total	87

Section 1 of the survey presented community participants a list of nine activities and asked them to respond if they had participated in the activity and on a three-point scale how important they believed the activity to be. Table 23 contains response by school to participation in activities.

While no test of significance was used with this data, it is interesting to note the difference in participation at the various sites.

The second part of question one asked community participants how important they believe activities are for students. The three-point scale used for this section was 3--Very Important, 2--Somewhat Important, and 1--Not Important. Table 24 contains the mean score for each activity by project site and total project.

It is apparent from Table 24 that community participants believe all activities except two and nine are very important, and they are somewhat important. The real difference in

Table 23. Community Survey Participation.

Activity	Site Participation			
	Jefferson County	Eagle	Holyoke	Rocky Ford
Give general information about your company, such as history, products or services provided and economic or social trends that affect your organization.	68%	47%	48%	57%
Give information about maintaining your organization including organizational structure, financial information and personnel practices.	36%	21%	35%	39%
Give tours and brief explanation of the whole organization.	73%	37%	70%	65%
Allow students to get detailed information about one or more departments in your organization, including such items as organization, types of jobs, special equipment and tools, worker tasks and types of skills needed by workers.	50%	26%	61%	61%
Allow students to spend time with individual workers to find out more about their jobs and their lifestyles.	50%	11%	57%	30%
Allow students to try out some simple job-related tasks.	27%	16%	57%	48%
Evaluate individual student's assignments and/or projects.	23%	11%	48%	22%
Help design and/or plan activities for student projects.	14%	16%	26%	18%
N =	22	19	23	23

Table 24. Community Survey - Activity Importance.

Item	Activity	Jefferson County	Eagle	Holyoke	Rocky Ford	All Sites	Rank
1	Give general information about your company, such as history, products or services provided and economic or social trends that affect your organization.	2.75	2.64	2.75	2.58	2.68	1.5
2	Give information about maintaining your organization including organizational structure, financial information and personnel practices.	2.31	1.83	2.25	2.79	2.29	9
3	Give tours and brief explanation of the whole organization.	2.69	2.54	2.67	2.82	2.68	1.5
4	Give information about job opportunities in your organization.	2.65	2.64	2.53	2.83	2.66	4.5
5	Allow students to get detailed information about one or more departments in your organization, including such items as organization types of jobs, special equipment and tools, worker tasks and types of skills needed by workers.	2.58	2.54	2.75	2.79	2.67	3
6	Allow students to spend time with individual workers to find out more about their jobs and their lifestyles.	2.6	2.1	2.62	2.67	2.50	7
7	Allow students to try out some simple job related tasks.	2.55	2.36	2.92	2.80	2.66	4.5
8	Evaluate individual student's assignments and/or projects.	2.5	2.56	2.67	2.58	2.58	6
9	Help design and/or plan activities for student projects.	2.43	2.36	2.45	2.40	2.41	8
	N =	22	19	23	23		

importance is found between sites on items 2, 6, 7 and 9. In each of these activities the Eagle Valley site placed lower importance than did the other three sites.

Question two of the community survey asked the following question: "What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom?" Table 25 contains the responses ranked for each site and the total program.

Question three of the community survey asked: "Do you think the students you have worked with have benefited by being at your site? Respondents were asked to respond to a five-point scale with one (1) being definitely no and five (5) definitely yes. Table 26 contains the mean response by site and overall mean for all sites. It is apparent from the mean scores that community participants believe very strongly that students benefited from their experience at the community sites.

Questions four through eight of the survey are not of interest in this evaluation and therefore are deleted from this report.

Question nine of the survey asked: "What do you think are the greatest strengths of the program?" Respondents were asked to check one or more of the four possible responses. Table 27 contains ranked responses for each site and the total program.

It is obvious that community participants believe the greatest benefit of the program is career exploration.

Table 25. Community Survey - Learning at Site.

	Jefferson County	Eagle	Holyoke	Rocky Ford	Total
First-hand knowledge of demands in a "real world"	1	1	2.5	1	1
Knowledge of how basic skills are used in real life	3	2	7	3	3
Working with other people	5	3.5	1	9	4
Knowledge of how the free enterprise system works	8.5	10	11	4	10
On-the-job skills	3	6.5	2.5	2	2
Information about how your company/organization is organized and managed	6	9	6	11	8.5
Self-discipline and responsibility	10	3.5	4.5	7.5	6
Information about jobs and lifestyles of workers	7	6.5	8.5	5.5	7
Motivation to learn	11	5	8.5	7.5	8.5
General information about your company/organization	3	8	4.5	5.5	5
Process of solving problems specific to a career field	8.5	11	10	10	11

Table 26. Community Response - Student Benefit

Site	N	Mean
Jefferson County	14	3.86
Eagle	13	4.31
Holyoke	19	4.68
Rocky Ford	23	4.65
Total	69	4.43

Question ten of the survey asked: "What do you think are the greatest weaknesses of the program. In this case, respondents were asked to check one or more of the six possible responses. Table 28 contains the six responses ranked by site and total program. In the case of item ten, the number of responses to items except the first ranked was too small to logically rank any others for the total program. The only weakness that had a significant number of responses across the sites was lack of feedback about students.

Table 27. Community Survey - Program Strengths

Item	Site and Rank				
	Jefferson County	Eagle	Holyoke	Rocky Ford	Total
Students learn about a variety of careers	1	1	2	1	1
Students learn about real life situations	2	2	1	2	2
Good way of getting students to learn	3	4	4	4	4
Students get experience in working with adults	4	3	3	3	3

Table 28. Community Survey - Program Weaknesses.

Item	Site and Rank				
	Jefferson County	Eagle	Holyoke	Rocky Ford	Total
Problems in the organization of the program	3	3	4.5	3	
Students not receiving sufficient preparation for site visit	4	2	2.5	5	
Inadequate supervision of students on your site	--	--	4.5	5	
Too much paperwork	--	--	--	5	
Lack of feedback about students	1	1	1	1	1
May be too difficult/ technical for some students	2	--	2.5	2	
N =	19	8	20	26	

E. General Program Questions

Three general program questions were asked in the evaluation design.

1. Is there a difference between rural and urban programs?
2. Is there a difference between infused and alternative approaches to implementation?
3. Are students better prepared for career decision making as a result of having been involved in CEBCEM?

Because the questions of rural/urban and infused/alternative are not mutually exclusive it was impossible to separate these variables for analysis. Jefferson County schools were the only urban sites in the project and also the only sites with alternative programs. Therefore, it was decided the most appropriate way to address these questions was to compare like groups between sites using the "student assessment" instrument.

Ninth grade was common for all sites and was used in the analysis. The data determined that the F statistic would be most appropriate for this analysis. (Analysis calculations are included as Appendix M.)

Comparisons were made between each site for each part of the student assessment instrument and the total. To determine if a difference existed at the beginning of the program, pre-tests were analyzed with Wheatridge compared with each site. No significant difference was found in any comparison.

Post-test scores were then analyzed by comparing Wheatridge with each other site. The results of this analysis are found on Table 29.

Table 29. Comparison of Post-Test Scores of Wheatridge by Each Site for Each Part of the Student Assessment.

Site	Instrument Section	F
Alameda	Total	1.35
Holyoke	Total	3.74*
Battle Mountain	Total	2.979*
Rocky Ford	Total	1.90
Alameda	Life Skills	.80
Holyoke	Life Skills	6.34*
Battle Mountain	Life Skills	8.08*
Rocky Ford	Life Skills	4.86*
Alameda	Basic Skills	1.21
Holyoke	Basic Skills	2.65*
Battle Mountain	Basic Skills	2.15
Rocky Ford	Basic Skills	1.62
Alameda	Career Development (3)	.63
Holyoke	Career Development (3)	.50
Battle Mountain	Career Development (3)	.22
Rocky Ford	Career Development (3)	.35

*F value exceeds the critical value of 2.46.

The third general program question addresses the impact of the program on career decision making.

From data presented previously in this report, the evidence is heavily in favor of the program making a significant difference in students' career information and life skills development.

The difference in these two components should greatly improve the students' career decision making ability.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

Based upon the data collected and implications drawn from the evidence, the following conclusions are drawn.

1. Students involved in the CEBCE programs significantly improved in application of basic skills during the course of the program. The degree of change varied between program sites and grade levels but 10 of 14 grade sites showed improvement in mean scores.

   The most significant change was found in students' scores on Part IV of the student assessment. When comparing pre-test/post-test scores for the total project, a t-value of 91.43 was found which exceeds the .05 critical value of 1.96.

2. Students involved in the CEBCE program significantly improved in "Life Skills" abilities as measured by the "student assessment."

   For the total program, significant change (.05 level) was found pre/post-test on the student assessment, Section 1.

   In analyzing students' change in Life Skills ability by site and grade level, 12 of 14 showed improvement in mean scores. The most change was in 9th grade rural sites where all made significant (.05 level) improvement during the program. The evaluator could not identify the source of change compared to other grade levels, but it seems worthwhile to consider this further.

Section 3 of the student assessment relates to application of life skills, attitudes toward work. As in Section 1, a significant change was found for the total program. However, in the analysis of this data by site and grade level it appears the greatest improvement was in the 7th and 8th grade at the rural sites.

3. In an effort to approach "Life Skills" and "Career Development" evaluation from a different vantage a unique method was developed for this project. The method utilized a simulated job interview with trained interviewers. The research design for this component included testing a control group and a sample group from each project site and grade level.

   A significant difference (.05 level) was found between the control group and the total project. Students from the project group scored higher in life skills and career development than did the control group.

   In comparing the control group with each project group, a significant difference (.05 level) was found in three of the four project groups. In the fourth group, the mean for the project group was higher, but not sufficient to determine a difference with 36 df.

   The interviewer observed a difference in communication skills with the one project group wherein a significant difference did not exist from the control group. This communication difference may account for the scores being lower at this site.

4. A significant difference existed between pre-test and post-test scores for students involved in CEBCE on career development as measured by the student assessment.

   Several questions were addressed regarding career development and in each instance significant improvement was made during the course of the project.

   Regarding sources of occupational information, each grade and site made improvement. A significant difference at the .05 level existed pre/post. The 209 students involved in the sample were able to site 337 more sources of occupational information at the close of the project.

   Career development regarding factors to consider in selecting an occupation was also significantly improved during the project. The 209 sample students sited 144 more factors in the post-test than they did in the pre-test.

   In associating skills needed with specific occupations, project students also made significant improvement. The 209 sampled students were able to make 297 more correct associations on the post-test than on the pre-test.

5. The general program questions revealed support for CEBCE from staff, parents and community participants.

   The staff was asked to rank learning activities by importance and effectiveness. It is interesting to note the difference in ranking on these two scales. The activities staff considered most important generally ranked lower in effectiveness and vice versa.

Both parents and community participants were asked to rank strengths and weaknesses of the program. It is worthy to note the high degree of agreement between the groups on the program strengths and the difference between the groups regarding their perceptions of the program weaknesses. It is also important to note the number of people responding to program weaknesses was less than one-half that of program strengths. The difference in community participation shown in Table 23 cannot be used as evidence in this evaluation. However, this may provide insight into difference in general community responses found throughout the rest of this component.

6. This evaluation could not show a clear cut distinction between urban and rural or infused and alternative programs. However the combination of urban-alternative program and rural-infused program was compared. The student assessment instrument which included all components was used as the instrument for this comparison.

As a total, significant differences were found between the two programs and locations, with the rural/infused showing more improvement. When the comparisons were made by component and site, it was found that the component of "life skills" development was the one where significant differences existed between the urban/alternative program and rural/infused programs. In all cases, the rural/infused sites scored significantly higher. It is not possible to clearly identify the source of this difference, but it is obvious that a difference exists.

7. Students involved in CEBCE as evidenced by the "student assessment" and "student interview" are significantly better prepared for career decision making.

The evaluator is not satisfied with the strength of evidence regarding career decision making from a research viewpoint. However, all data collected in this evaluation provides evidence that the program makes a difference in those aspects of career decision making which lead to informed occupational choice.

B. Recommendations

Based upon the evidence presented, the project evaluator makes the following recommendations:

1. Colorado Experience-Based Career Education has a significant impact on improving 7-10th grade students' abilities in basic skills, life skills and career development, and therefore, should be expanded as an option for students throughout the state.
2. It is recommended that additional evaluation be devoted to determining whether the infused approach or alternative approach is most effective in accomplishing the goals of CEBCE.
3. It is recommended that additional evaluation efforts be made to more precisely determine the effect of CEBCE in occupational choice. This evaluation should be longitudinal in nature.

APPENDIX A

STUDENT PRE-ASSESSMENT

STUDENT PRE-ASSESSMENT

Student:

The purpose of this assessment is to provide basic information for programs. Your response will be confidential and used only to determine program results.

It is very important that you give us your honest opinion and the most correct information possible.

Thank you for your cooperation and assistance.

Prepared by:

Glen Rask
Colorado State University

Recognition is given for materials included developed by The Northwest Regional Education Lab and The Colorado State Board for Community Colleges and Occupational Education.

PART I--DEMOGRAPHIC INFORMATION

Name_____

School_____ School District_____

Grade_____

Please circle the correct information below.

1. Have you been involved in an experience-based career education program prior to this year? Yes No

2. Which of the following represents where you live?
   1. Rural - farm or ranch
   2. Rural - non-farm
   3. Town below 1,000 population
   4. Town 1,000 to 5,000 population
   5. Town 5,000 to 10,000 population
   6. Town above 10,000
   7. City above 20,000

3. What do you expect to be doing one year after completing high school?
   1. Working full-time
   2. Entering an apprenticeship or on-the-job training program
   3. Going into regular military service or to a service academy
   4. Attending a vocational, technical, trade or business school
   5. Attending a junior or community college
   6. Attending a four-year college or university
   7. Working part-time
   8. Other (travel, take a break)
   9. I have no idea what I'll be doing

4. List work you have done as a part-time or full-time job and the number of weeks you have worked.

	Work	Number of Weeks
1.		
2.		
3.		
4.		

PART II EXPERIENCE CHECKLIST

In Section I indicate by circling the number on the right how well prepared you think you are to accomplish the statements: (1) Very well prepared (2) Somewhat prepared (3) Slightly prepared (4) Not at all prepared

I am _____ prepared to:	Very Well	Some-what	Slightly	Not at all
1. Solve problems through a logical process.....	1	2	3	4
2. Participate in activities to learn more about myself..	1	2	3	4
3. Work with others on cooperative projects.....	1	2	3	4
4. Review my interests and abilities related to career choices.....	1	2	3	4
5. Experience how the government and the economy affect the world of work.....	1	2	3	4
6. Study or experience what to look at when considering a job.....	1	2	3	4
7. Study or experience how to find and keep a job.....	1	2	3	4
8. Apply basic skills in solving problems aroung me.....	1	2	3	4
9. Use a number of different resources in gathering information about work and decision making.....	1	2	3	4
10. Communicate comfortably with adults.....	1	2	3	4
11. Take the responsibility for my actions.....	1	2	3	4
12. Make adjustments in my plans as a result of changing situations.....	1	2	3	4

In Section II, indicate by circling the number on the right how much experience you have had in completing the following activities: (1) Have done it often (2) Have done it several times (3) Have done it once (4) Have never done it. (No student is likely to have had all of these experiences.)

I have experienced:	Often	Several	Once	Never
13. Balancing a checkbook.....	1	2	3	4
14. Comparing insurance plans.....	1	2	3	4
15. Completing a tax form.....	1	2	3	4
16. Planning a personal budget.....	1	2	3	4
17. Practicing basic first aid.....	1	2	3	4
18. Attending a local government meeting (school board, city council, etc.).....	1	2	3	4
19. Studying consumer protection laws.....	1	2	3	4
20. Obtaining a social security card.....	1	2	3	4
21. Identifying a behavior or characteristic I would like to change about myself, established a plan for making the change and followed through on the plan.....	1	2	3	4
22. Participating in job interviews.....	1	2	3	4
23. Completing job applications.....	1	2	3	4
24. Interviewing adults in the community.....	1	2	3	4
25. Planning some of my own learning assignments or pro-	1	2	3	4

PART III--OPINIONS ABOUT WORK

This part asks your opinion about issues related to work.

For each statement on the left, circle the response on the right that reflects your opinion.

(1) Strongly Agree
(2) Agree
(3) Not Sure
(4) Disagree
(5) Strongly Disagree

		Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1.	The classes taken in high school have little effect on occupations you may choose.....	1	2	3	4	5
2.	An economic recession affects some occupations more than others.....	1	2	3	4	5
3.	Most people select an occupation and remain in it their working years.....	1	2	3	4	5
4.	Childhood experiences seldom effect our career choices.....	1	2	3	4	5
5.	Every job has some activities that are boring.....	1	2	3	4	5
6.	Most occupations require a college degree.....	1	2	3	4	5
7.	The amount of time you have for leisure is seldom affected by your occupation.....	1	2	3	4	5
8.	Every occupation has disadvantages.....	1	2	3	4	5
9.	The number of new occupations is decreasing because of technology.....	1	2	3	4	5
10.	The number of available jobs is decreasing.....	1	2	3	4	5
11.	Few people could be successful in more than one occupation.....	1	2	3	4	5
12.	Your hobbies could have an effect on your occupational choice.....	1	2	3	4	5
13.	In applying for a job it is best to begin by talking with the personnel director.....	1	2	3	4	5
14.	Most people enter their occupation through career planning.....	1	2	3	4	5
15.	Gathering information about occupations is more valuable than experiences when making an occupational choice.....	1	2	3	4	5

PART IV--OCCUPATIONAL INFORMATION

The purpose of Part IV is to determine your occupational information and experience. Complete as many items as you can.

1. List sources (people and things) that you could use to answer questions about occupations.

1._____ 6._____

2._____ 7._____

3._____ 8._____

4._____ 9._____

5._____ 10._____

2. List factors you believe one should consider in choosing an occupation.

1._____ 6._____

2._____ 7._____

3._____ 8._____

4._____ 9._____

5._____ 10._____

3. In the following chart, list occupations in which you have an interest in the space provided in the first column. In the second column, list skills used by workers in that occupation. In the third column list academic skills and how they are applied to those worker skills.

The following example will provide a guide for completion of this question. Complete charts for as many occupations as you can, up to nine.

Occupation	Skills	Application of Academic Skills
Painter	Mix paint Estimate quantities Apply paint Clean Surfaces	Art in mixing colors. Math in figuring square feet. None Science in chemicals to clean.

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

OCCUPATION	SKILLS	APPLICATION OF ACADEMIC SKILLS

APPENDIX B

HIGH SCHOOL APL SURVEY

Form HS1

High School APL Survey

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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Jim C. Cates

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DIRECTIONS

The questions in the High School APL Survey deal with problems found in everyday life. You are not expected to know the answer to every question, but please try to answer as many as you can. If you are not sure which answer is correct, make your best guess by eliminating those that you know are wrong. Then use any ideas you may have to choose your answer from those that are left.

Each question in the survey has 4 possible answers, which are labeled A, B, C, and D. The numbers of the questions and these letters match the numbers and letters on your answer sheet.

Read each question carefully and completely. Read all 4 answers before you decide which one is best. When you have decided, find the number on your answer sheet that matches the number of the question you are working on. Then, mark the space that contains the letter that matches the answer you have selected. Be sure to indicate your answer clearly. Do this for every question. **Make sure that the number of the question in the booklet matches the number of the question on the answer sheet.**

In some cases, there is a chart or table that you will need to use to answer a particular question. Be sure to look at all the material carefully before you try to answer the question.

For some questions, you will need to do some figuring. Do the figuring on the scratch paper, but **be sure to mark the answer on your answer sheet.**

Now look at this example and the spaces on your answer sheet labeled "Example X."

EXAMPLE X

Who was the first president of the United States?

A. John Adams

B. Thomas Jefferson

C. Abraham Lincoln

D. George Washington

Since D, George Washington, is the correct answer, the space labeled D has been darkened under "Example X" on the answer sheet.

Now work through this second example and mark the answer sheet in one of the spaces under "Example Y."

EXAMPLE Y

Harry bought 2 packages of candy. Each package cost 10¢. How much change should he get from 50¢?

A. 10¢

B. 20¢

C. 30¢

D. 40¢

DO NOT TURN THE PAGE UNTIL TOLD TO DO SO.

1. Jack Youngtree lives at 444 Dogwood Lane, Apple Blossom, Vermont, 05111. He wrote several letters to Ms. Ellen Wood, the editor of the *Piper Daily News*. This paper is put out in Piper, Vermont, 05112. Each time Jack addressed an envelope, he did it differently. The post office could not deliver one of the letters.

   The envelopes he wrote are shown below and on the next page (page 5). Which one was **NOT** delivered?

A.

Jack Youngtree
444 Dogwood Lane
Apple Blossom, Vermont 05111

Mrs. Ellen Wood, Editor
Piper Daily News
Piper, Vermont 05112

B.

Youngtree
444 Dogwood Lane
05111

Editor
Daily News
Pipa, Vermont

GO ON TO THE NEXT PAGE.

C.

J. Youngtree
444 Dogwood
Apple Blossom, VT 05111

Editor Wood
Piper News
Piper, VT 05112

D.

Dogwood Lane
VT

Wood
Piper, VT

GO ON TO THE NEXT PAGE.

2. Jane Diamond Hughes is applying for a Social Security number. What should Jane put in the space labeled 1?

ID CN DO

APPLICATION FOR A SOCIAL SECURITY NUMBER B34

DO NOT WRITE IN THE ABOVE SPACE

See Instructions on Back. Print in Black or Dark Blue Ink or Use Typewriter.

1 Print FULL NAME YOU WILL USE IN WORK OR BUSINESS (First Name) (Middle Name or Initial - if none, draw line ___) (Last Name)

2 Print FULL NAME GIVEN YOU AT BIRTH

3 PLACE OF BIRTH (City) Rocky Hill (County if known) Somerset (State) NJ

4 MOTHER'S FULL NAME AT HER BIRTH (Her maiden name) Mary Jane Davidson

5 FATHER'S FULL NAME (Regardless of whether living or dead) John Blair Diamond

6 YOUR DATE OF BIRTH (Month) (Day) (Year) 8/12/56

7 YOUR PRESENT AGE (Age on last birthday) 19

8 YOUR SEX MALE ☐ FEMALE ☒

9 YOUR COLOR OR RACE WHITE ☐ NEGRO ☐ OTHER ☒

10 HAVE YOU EVER BEFORE APPLIED FOR OR HAD A SOCIAL SECURITY, RAILROAD, OR TAX ACCOUNT NUMBER? NO ☒ DON'T KNOW ☐ YES ☐ If "YES" Print STATE in which you applied and DATE you applied and SOCIAL SECURITY NUMBER if known)

11 YOUR MAILING ADDRESS (Number and Street, Apt. No., P.O. Box, or Rural Route) 2 North Post St. (City) Madison (State) Illinois (Zip Code) 61199

12 TODAY'S DATE August 1, 1976

13 TELEPHONE NUMBER none

14 NOTICE: Whoever, with intent to falsify his or someone else's true identity, willfully furnishes or causes to be furnished false information in applying for a social security number, is subject to a fine of not more than $1,000 or imprisonment for up to 1 year, or both.

Sign YOUR NAME HERE (Do Not Print) Jane D. Hughes

TREASURY DEPARTMENT Internal Revenue Service Form SS-5 (__)

RESCREEN ASSIGN DUP ISSUED

Return completed application to nearest SOCIAL SECURITY ADMINISTRATION OFFICE

A. Jane D. Hughes

B. Hughes, Jane D.

C. Jane Diamond

D. Diamond, Jane

3. Milly took bowling lessons at the local YWCA. They cost $5 for the first week and $2 for each additional week. She took lessons for 7 weeks. How much did she have to pay?

A. $ 7

B. $14

C. $17

D. $19

GO ON TO THE NEXT PAGE.

4. Mrs. Green's landlord has not kept his promise to fix the short circuit in the wiring in her apartment. Which is the best place for her to take her complaint?

   A. The police department

   B. The fire department

   C. The city housing commission

   D. The district attorney's office

5. Lee wants to read a book about car repair so he can fix his van. He doesn't want to buy the book. Where should he go to get it?

   A. Local bookstore

   B. Public library

   C. Auto dealer

   D. United Fund office

6. What does it mean when people have the *right of way* in traffic?

   A. They must stay in the right lane.

   B. They must turn right at the next corner.

   C. They have the right to turn in any direction they choose.

   D. They do not have to yield to cross traffic.

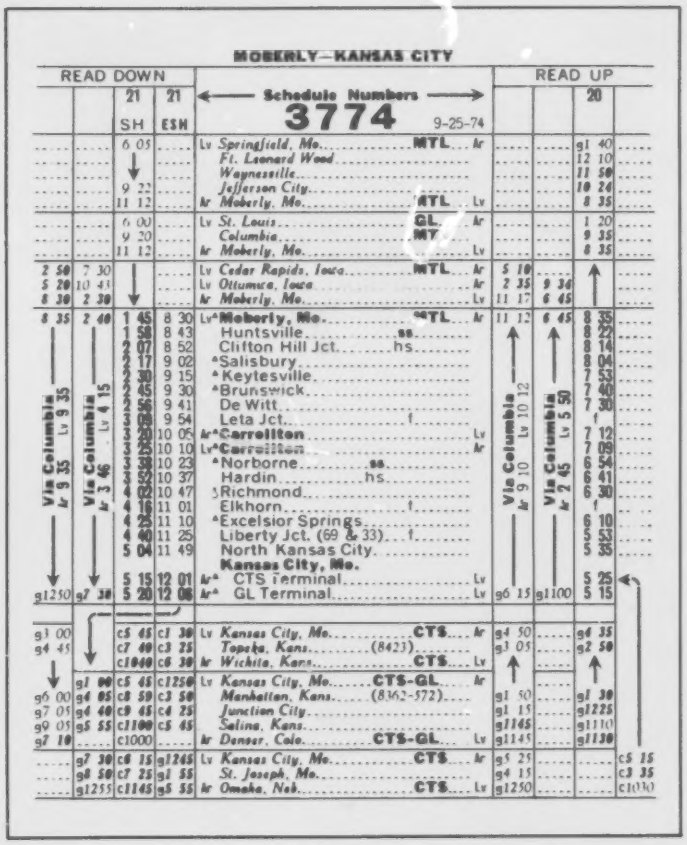
7. A bus schedule for the trip between Moberly and Kansas City is shown below. Mr. Clark lives in Moberly. He has to go to Kansas City on Tuesday. He has an interview scheduled there for 1:30 P.M. He should take the bus that leaves Moberly at what time?

A. 8:30

B. 9:30

C. 11:00

D. 11:12



MOBERLY—KANSAS CITY

READ DOWN					Schedule Numbers 3774 9-25-74	READ UP			
		21 SH	21 ESH					20	
		6 05		Lv Springfield, Mo. MTL	hr			g1 40	
		↓		Ft. Leonard Wood				12 10	
				Waynesville				11 58	
		9 22		Jefferson City				10 24	
		11 12		hr Moberly, Mo. MTL	Lv			8 35	
		6 00		Lv St. Louis GL	hr			1 20	
		9 20		Columbia MY				9 35	
		11 12		hr Moberly, Mo.	Lv			8 35	
2 50	7 30	↓		Lv Cedar Rapids, Iowa MTL	hr	5 10		↑	
5 20	10 41			Lv Ottumwa, Iowa	hr	2 35	9 36		
8 30	2 30			hr Moberly, Mo.	Lv	11 17	6 45		
8 35	2 40	1 45	8 30	Lv^ Moberly, Mo. ^GL	hr	11 12	6 45	8 35	
↓	↓	1 58	8 43	Huntsville ss		↑	↑	8 22	
		2 07	8 52	Clifton Hill Jct. hs				8 14	
		2 17	9 02	^Salisbury				8 04	
		2 30	9 15	^Keytesville				7 53	
		2 45	9 30	^Brunswick				7 40	
		2 56	9 41	De Witt				7 30	
		3 08	9 54	Leta Jct. f				f	
		3 20	10 05	hr^ Carrollton	Lv			7 12	
		3 25	10 10	Lv^ Carrollton	hr			7 09	
		3 38	10 23	^Norborne ss				6 54	
		3 52	10 37	Hardin hs				6 41	
		4 02	10 47	‡Richmond				6 30	
		4 16	11 01	Elkhorn f				f	
		4 25	11 10	^Excelsior Springs				6 10	
		4 40	11 25	Liberty Jct. (69 & 33) f				5 53	
		5 04	11 49	North Kansas City				5 35	
Via Columbia hr 9 35 Lv 9 35	Via Columbia hr 3 46 Lv 4 15			**Kansas City, Mo.**		Via Columbia hr 9 10 Lv 10 12	Via Columbia hr 2 45 Lv 5 50		
↓	↓	5 15	12 01	hr^ CTS Terminal	Lv	↑	↑	5 25	←
g1250	g7 38	5 20	12 06	hr^ GL Terminal	Lv	g6 15	g1100	5 15	
g1 00		c5 45	c1 30	Lv Kansas City, Mo. CTS	hr	g4 50		g4 35	
g4 45		c7 40	c3 25	Topeka, Kans. (8423)		g3 05		g2 50	
↓		c1040	c6 30	hr Wichita, Kans. CTS	Lv	↑		↑	
	g1 00	c5 45	c1256	Lv Kansas City, Mo. CTS-GL	hr	g1 50		g1 30	
g6 00	g4 05	c8 59	c3 50	Manhattan, Kans. (8362-572)		g1 15		g1225	
g7 05	g4 40	c9 45	c4 25	Junction City		g1145		g1110	
g9 05	g5 55	c1100	c5 45	Salina, Kans.		g1145		g1130	
g7 10		c1000		hr Denver, Colo. CTS-GL	Lv				c5 15
	g7 30	c6 15	g1245	Lv Kansas City, Mo. CTS	hr	g5 25			c3 35
	g8 50	c7 25	g1 55	St. Joseph, Mo.		g4 15			c1030
	g1255	c1145	g5 55	hr Omaha, Neb. CTS	Lv	g1250			

All trips operate daily unless otherwise noted.
AM—Light Face. **PM—Bold Face.**
Times shown in ITALICS indicate service via connecting trip or trips.

EXPLANATION OF REFERENCE MARKS

CTS or c—Continental Trailways.
GL or g—Greyhound Lines, Inc.
JL—Jefferson Lines.

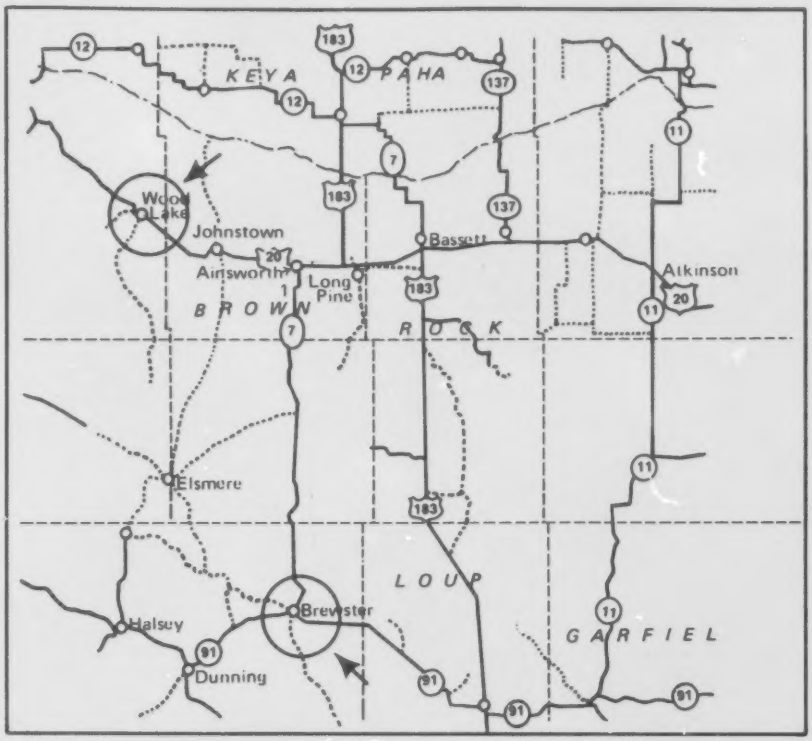
MTL—MISSOURI TRANSIT.
SHS—Scenic Hawkeye Stages.
SH or ‡—Sunday and Holidays ONLY.
^—Full Service Terminal.
LB—Lock Box for deposit of express after hours.

#—Meal stop or rest stop.
f—Flag stop.
hs—Highway stop.
D—Goes into town to discharge only.
ss—Station stop. * or Dly—Daily.
ESH or °—Except Sundays and Holidays.

‡ or Sun—Sundays only.
δ—Checked baggage, prepaid and collect express—No C.O.D.
sh-Sun—When Holiday falls on Monday-Schedule will operate Monday in place of Sunday.

GO ON TO THE NEXT PAGE.

8. Mr. King wants to take the most direct route from Wood Lake to Brewster. In what town does he have to change from one highway to another?



A. Elsmere

B. Ainsworth

C. Johnstown

D. Brown Rock

9. Charlene is looking for a job as a sales clerk. Where will she likely get the **LEAST** help?

A. Newspaper want ads

B. An employment agency

C. Her friend who works as a telephone operator

D. The personnel manager in a department store

GO ON TO THE NEXT PAGE.

10. Sally is applying for a job as a secretary. She types 65 words per minute on an electric typewriter. In which space on the application blank should she write this?

MILLER CORPORATION

JOB APPLICATION

Name: _____ Address: _____

Phone: _____

Position Sought: I _____

Education: II _____

Previous Experience: III _____

_____

_____

_____

Skills: IV _____

A. I

B. II

C. III

D. IV

11. Barry is giving Rick a hard time at work. What is the best thing for Rick to do?

A. Tell Barry to stop or fight it out.

B. Ask Barry to stop or he'll have to tell the boss.

C. Tell the boss right away so Barry will be transferred.

D. Find some way to give Barry a hard time back.

GO ON TO THE NEXT PAGE.

12. This notice is posted on the bulletin board of the ABC Company. What does this notice mean?

A B C COMPANY
We are an Equal Opportunity Employer

A. All people working for ABC are given regular chances for promotion.

B. A person doesn't have to meet job requirements to apply for a job at ABC.

C. When ABC's bosses hire someone, they do so without regard to race, creed, sex, or national origin.

D. Anyone can work at ABC.

13. Pamela Jones makes $3.00 an hour and usually works a 40-hour week. She is paid time-and-a-half for overtime. How much did she earn the week she worked 43 hours?

A. $120.00

B. $124.50

C. $129.00

D. $133.50

14. The EZ Paint factory is an *open shop*. What does this mean?

A. People can buy things 24 hours a day there.

B. Members of any race, color, or creed may work there.

C. No one has to join a union in order to work there.

D. Customers can shop there without a credit card.

GO ON TO THE NEXT PAGE.

15. Randy Murphy took some tests from his school's vocational counselor. She told him he did well in math and business and that it might be good for him to look for a job that uses these skills. If he takes her advice, which ad should he answer first?

1. **Truck Driver**—must have commercial license. Full company benefits with profit sharing. An Equal Opportunity Employer. Contact Ed Kissman, Calcarleu Lumber Company, 258-2201.

2. **Apt. Managing Couple**
48-unit complex in University area. Furnished apartment and salary. Experience essential. 465-9927, 453-4545, 452-3314.

3. **Social Worker-Trainee**—$400 month! High school? Stable? Ability advances! Benefits! Call now 444-6711. Republic Personnel Service 2101 South Hall 35.

4. **Immediate Opening** for a construction laborer with some knowledge of construction. 345-4785; ask for Achelata.

5. **If You're Interested** in earning $1550 a month part time with an investment of $2990 fully returnable, call Mr. Williams collect, 215-453-4897.

6. **Trainee**
Tired of hearing "need experience"? Knowledge of simple bookkeeping, a good phone voice, and a desire to learn will be appreciated in this friendly office where you can learn an exciting and rewarding career. Good hours—plush office! Call Liz, 454-3986. Evins Personnel Consultants, 959 Rein.

A. 2

B. 3

C. 5

D. 6

16. The XYZ Employment Agency charged Denise Franke 4% of her salary the first year to find her a job. The job they found for her pays $8,000 per year. Denise wants to pay XYZ $80 each month until she's paid up. How many months will it take her to pay back the fee?

A. 4

B. 8

C. 10

D. 100

GO ON TO THE NEXT PAGE.

17. Jane Dorsey's little sister, Betsy, swallowed some bleach. Jane looked at the label on the bottle to see what she should do. The label is shown below. What should she give Betsy to drink?

> **HARMFUL IF SWALLOWED.** If swallowed, give one or two glasses of water or milk. Call a physician. Do not mix or use with acids, ammonia, bowl cleaner or other household chemicals. Gases might be formed. Keep bottle upright in cool place.

A. A glass of lemonade

B. A glass of milk

C. A glass of cola

D. Nothing

18. Doug is making a list of the things he wants to stock in a first aid kit for his car. What should his list include?

I. Bandaids
II. A tube of burn ointment
III. Gauze bandages
IV. Aspirin

A. I and II only

B. I, II, and IV only

C. I, III, and IV only

D. I, II, III, and IV

19. Why were the federal food and drug laws first passed?

A. To make sure the Food Stamp Program was run well

B. To get rid of dirty and unhealthy conditions in food processing plants

C. To control the tax on food and drugs

D. To give certain special groups of people the food and drugs they need

GO ON TO THE NEXT PAGE.

20. Mrs. Koch is pregnant. Her doctor told her to keep a record by filling in the chart below each week. Thursday night she ate meat loaf and green beans. She weighed 114 pounds. Where on the chart should she write that she ate beans?

NAME: Mrs. Aileen Koch **WEEK OF:** July 10, 1975

		Meat	Dairy	Vegetables	Grains	Weight	Sleep	Exercise	Cigarettes
Mon.	Breakfast Lunch Dinner	chicken	1 c. milk cottage cheese 1 c. milk	peas & carrots	toast rice	115	8 hours	½ hour walk	6
Tues.	Breakfast Lunch Dinner	liver	1 c. milk cottage cheese 1 c. milk	2 tomatoes onions spinach	cold cereal crackers potatoes	116	7½ hours	¾ hour	7
Wed.	Breakfast Lunch Dinner	tuna fish salad 2 hot dogs	1 c. milk 1 c. milk yogurt	pea soup	cold cereal 2 slices bread	116	8 hours	½ hour walk	5
Thurs.	Breakfast Lunch Dinner	I		II	III	IV			
Fri.	Breakfast Lunch Dinner								

A. I

B. II

C. III

D. IV

21. Dorothy is going out to eat at a place that has tuna salad, spaghetti with tomato sauce, spinach salad, and french-fried potatoes on special. She wants to eat a high-protein dinner. What should she order?

A. Tuna salad

B. Spaghetti with tomato sauce

C. French-fried potatoes

D. Spinach salad

GO ON TO THE NEXT PAGE.

22.

CALORIES IN COMMON FOODS

		Calories
Pancakes (griddle cakes):		
Wheat	1 cake, 4 in. in diameter	60
Buckwheat	1 cake, 4 in. in diameter	55
Pizza (cheese)	5½ in. sector, 1/3 of a 14-in. pie	185
Pretzels	5 small sticks	20
Rye Wafers	2 wafers, 1¾ by 3½ in.	45
Cheeseburger	1 plain	500
Beverages:		
Ginger ale	8-ounce glass	70
Cola-type	8-ounce glass	95
Milkshake	8-ounce glass	300

Tony is supposed to be on a diet. He stopped at the Palace Grill on his way home from school. He had 1/3 of a cheese pizza and 2 milkshakes. The doctor told him not to eat more than 1,000 calories for supper. How many calories can he eat for supper when he gets home?

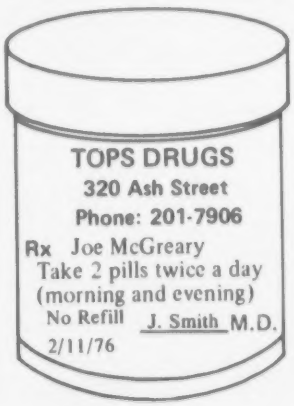
A. 785

B. 600

C. 215

D. None, he's already eaten too much.

23. Joe McGreary picked up the pills his doctor had told him to take. The druggist gave him the bottle shown below. How many pills should Joe take in 1 day?



A. 1

B. 2

C. 4

D. 6

91

24. The chart below shows the tar and nicotine content of certain cigarettes. Which brand is **LEAST** dangerous to people's health?

CIGARETTE CARCINOGEN CONTENT

	tar, milligrams per cigarette	nicotine, milligrams per cigarette
Brand S (Filter)	15	1.0
Brand S (Menthol)	13	0.9
Brand R (Filter)	14	0.9
Brand R (Menthol)	13	0.8
Brand T (Filter)	11	0.6
Brand T (Menthol)	12	0.7
Brand W (Filter)	12	0.8
Brand W (Menthol)	11	0.8

A. S (Filter)

B. R (Menthol)

C. T (Filter)

D. W (Menthol)

25. Fred Felder was arrested and charged with armed robbery. He asked his brother to get him a lawyer. The lawyer's fee was too high. Does Fred have to stand trial without a lawyer?

A. Yes; if he can't afford one, he doesn't get one.

B. No; the court will appoint a lawyer to defend him.

C. No; the welfare office will assign a lawyer to him.

D. No; the district attorney will defend hi. for free.

26. Which service do taxes usually **NOT** pay for?

A. Utilities for homes

B. Police protection

C. Schools for children

D. Street repairs

GO ON TO THE NEXT PAGE.

27. The House of Representatives is voting on a bill to lower taxes. It takes a simple majority to pass this bill. There are 435 representatives. How many of them must vote "yes" if the bill is to pass?

A. 50

B. 100

C. 208

D. 218

28. According to the United States Constitution, which groups should be allowed to have peaceful public meetings?

A. All groups

B. Only groups whose members are all U.S. citizens

C. Only the few groups that will guarantee in writing not to cause trouble

D. Only groups that the government has okayed

29. Joan Frask is writing a letter to her congressman, Henry Sanchez. The House of Representatives is going to vote on House Bill 76-891. This bill would force all cities to set curfews for young people. Joan is against this bill. There are many ways that she can tell Congressman Sanchez what she wants. Which one way is **NOT** correct?

A. "I urge you to vote 'no' on House Bill 76-891."

B. "Please support curfews and vote for House Bill 76-891."

C. "I am opposed to setting curfews and ask you to vote against House Bill 76-891."

D. "When the House votes on House Bill 76-891, please vote against its passage."

GO ON TO THE NEXT PAGE.

30. Emily Schmidt has a 1-year lease on her apartment. After living in the apartment for 8 months, she found a cheaper apartment closer to her shop. Her friend John Marrot has agreed to take over her lease, and the landlord has given his permission. Where should **John Marrot** sign his name on the form below?

ASSIGNMENT OF LEASE

For value received we do hereby assign all our right, title and interest in and to the within lease to John Marrot

_____, who hereby accepts said assignment and agrees to fulfill all the terms of this lease

from I day of II 19___

III

Assignor.

IV

Assignee.

The undersigned hereby consents to the above assignment waiving none of the provisions of this lease.

Grant Williams

Lessor.

A. I

B. II

C. III

D. IV

31. The law says that a person who is sentenced to prison for life can be paroled on the same terms as someone who is sentenced to 20 years. A person who is sentenced to 20 years is eligible for parole after serving 1/3 of his term. How many **months** must a prisoner with a life sentence serve before he can be paroled?

A. 6

B. 7

C. 20

D. 80

GO ON TO THE NEXT PAGE.

32. Floyd Webb was picked up by the police near ACE Sporting Goods shortly after it was robbed. At the jail, Officer Forest told him that if he signed a confession, he'd get off with only 1 year's probation. Because he believed Officer Forest, Webb signed the confession. The judge found him guilty and gave him 5-15 years. Right after his arrest, Webb had been shown the following statement. Which sentence tells why Webb should **NOT** have signed the confession?

YOUR RIGHTS AFTER ARREST

What happens after you are arrested?

May you be forced to answer questions?

I. After arrest, you have an absolute right to remain silent and not to answer any questions.

II. No one has a right to force you to answer questions or to sign anything.

III. If someone does try to make you talk or sign something by threats or promises, tell the police official in charge and your lawyer.

IV. No promise made in the police station will be binding in court.

May you use the telephone?

As soon as you are brought to the police station, you have a right to use the telephone to call your family, a friend, or a lawyer and to arrange bail.

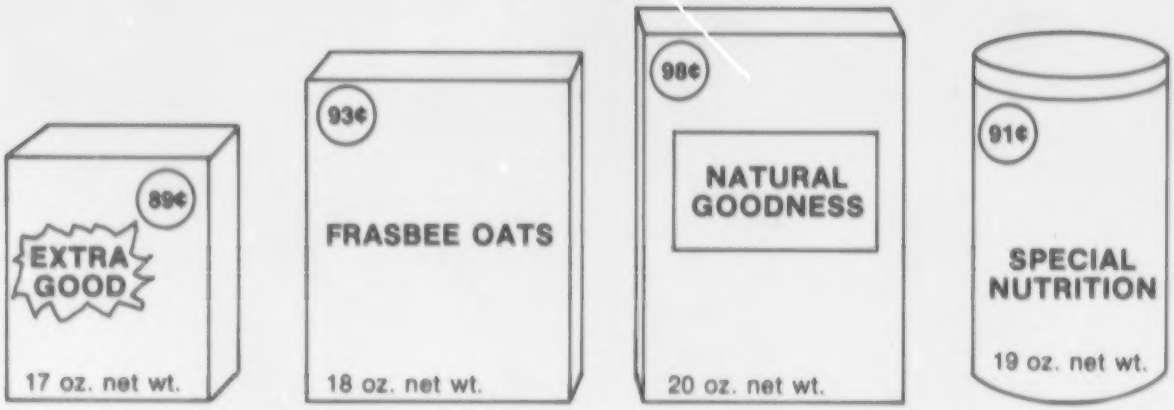
A. I

B. II

C. III

D. IV

GO ON TO THE NEXT PAGE.



33. Which box contains the most cereal by weight?

A. Extra Good

B. Frasbee Oats

C. Natural Goodness

D. Special Nutrition

34. Ellen Kim has a motorcycle. She wants to keep it in good shape. A portion of the owner's manual is shown below. How often should she change the oil in the gearbox?

KEEPING YOUR MOTORCYCLE IN GOOD REPAIR

ROUTINE MAINTENANCE:

1) Lubricate control cables ..... every 1,000 miles
2) Remove chain for cleaning and greasing ..... every 1,000 miles
3) Change oil in engine and chain case ..... every 4,000 miles
4) Change oil in gearbox ..... every 6,000 miles
5) Grease wheel bearings ..... every 12,000 miles

A. Every 1,000 miles

B. Every 4,000 miles

C. Every 6,000 miles

D. Every 12,000 miles

GO ON TO THE NEXT PAGE.

35. The Grants applied for a charge account at the local hardware store. The manager told them that they cannot start charging things until the store gives them a *credit check*. What does this mean?

A. Someone will check to make sure the Grants pay their bills on time.

B. The Grants must put down $25 as a security deposit.

C. Someone will check whether the Grants belong to a political party.

D. The Grants will receive a card to use instead of money.

36. Sarah Gibbs saw the ad below in Monday's paper. That same day, she went to the store and asked to see the advertised radio. The salesman told her that the last one had been sold "less than an hour ago." He said they still had a "much better model" on special for only $88.39. Should Sarah buy the "much better model"?

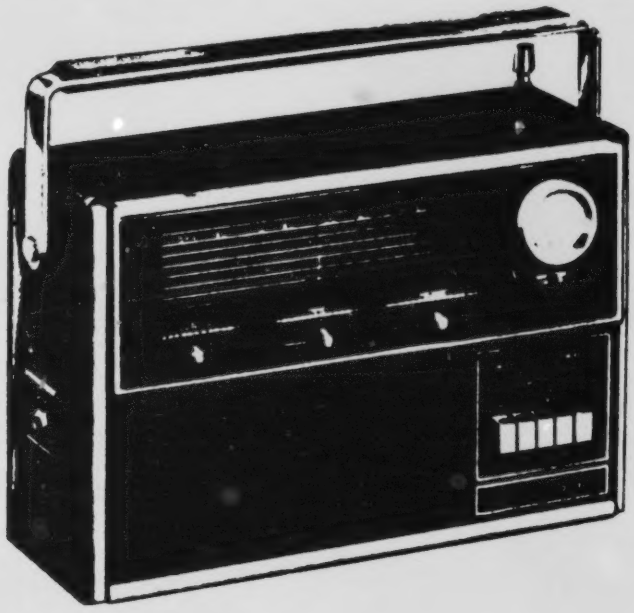
Portable Radio

Multi-band, Multi-purpose
You can even listen to
TV channels 2-13

AC current or batteries

Cut $20

$39.50



A. Yes, because it's probably a better bargain.

B. Yes, because it probably has even more channels.

C. No, because what the salesman is trying to do is illegal.

D. No, because she can't afford the better model.

GO ON TO THE NEXT PAGE.

37. Sometimes stores advertise brand name products at unusually low prices. Why might a store owner do this?

A. He's a nice guy who wants to do people favors.

B. He can write off the loss as a tax deduction.

C. He wants to pass his profits on to his customers.

D. He hopes people will buy other things when they come in for the sale.

38. A government report says: "If every household in the United States lowered its heating temperatures by 6 degrees, the demand for fuel would drop by more than 570,000 barrels of oil per day. This is enough to heat over 9 million homes during the winter season." Doris wants to figure out how much oil this would save in a week. What should she do?

A. Divide 9 million by 7

B. Divide 570,000 by 7

C. Multiply 9 million by 7

D. Multiply 570,000 by 7

39. Part of Ellen Dorney's income tax return for 1975 is shown on the next page (page 23). Does Ellen get a refund or must she pay a balance due? How much?

A. Refund: $137.00

B. Refund: $276.00

C. Balance Due: $689.00

D. Balance Due: $413.00

GO ON TO THE NEXT PAGE.

Short Form 1040A — U.S. Individual Income Tax Return

Department of the Treasury Internal Revenue Service — **1975**

Please print or type

Name (If joint return, give first names and initials of both): ELLEN P. — Last name: DORNEY

Present home address (Number and street, including apartment number, or rural route): 13 Bell Street

City, town or post office, State and ZIP code: North Chester, MA 02123

Your social security number: 205 30 7745 — Spouse's social security no.:

For Privacy Act Notification, see page 2 of Instructions.

For IRS use only

Occupation: Yours ► Spouse's ►

Requested by Census Bureau for Revenue Sharing

A In what city, town, village, etc., do you live? North Chester

B Do you live within the legal limits of the city, town, etc.? [X] Yes [ ] No [ ] Don't know

C In what county and State do you live? County Hudson State MA

D In what township do you live? (See page 5.) Chester

Filing Status (check only ONE box)

1 [X] Single

2 [ ] Married filing joint return (even if only one had income)

3 [ ] Married filing separately. If spouse is also filing give spouse's social security number in designated space above and enter full name here ►

4 [ ] Unmarried Head of Household (See page 4 of Instructions) ►

5 [ ] Qualifying widow(er) with dependent child (Year spouse died ► 19). See page 4 of Instructions.

Exemptions

6a Regular [X] Yourself [ ] Spouse — Enter number of boxes checked ► 1

b First names of your dependent children who lived with you — Enter number ► 0

c Number of other dependents (from line 22) ► 0

d Total (add lines 6a, b, and c) ► 1

e Age 65 or over [ ] Yourself [ ] Spouse; Blind [ ] Yourself [ ] Spouse — Enter number of boxes checked ► 0

7 Total (add lines 6d and e) ► 1

8 Presidential Election Campaign Fund — Do you wish to designate $1 of your taxes for this fund? [✓] Yes [ ] No; If joint return, does your spouse wish to designate $1? [ ] Yes [ ] No

Note: If you check the "Yes" box(es) it will not increase your tax or reduce your refund.

Attach Copy B of Forms W-2 and Check or Money Order here

9	Wages, salaries, tips, and other employee compensation (Attach Forms W-2. If unavailable, see page 6 of Instructions)	9	4303 64
10a	Dividends (if over $400, see Instructions at top of page 3) $ none — 10b Less exclusion $ none — Balance ►	10c	0 00
11	Interest income (if over $400, see Instructions at top of page 3)	11	0 00
12	Total (add lines 9, 10c, and 11) **(Adjusted Gross Income)** (If less than $8,000, see page 18 of Instructions on "Earned Income Credit.")	12	4303 64

- **If you want IRS to figure your tax, see page 6 of Instructions.**
- **If line 12 is under $15,000, find tax in Tax Tables (on pages 8–18) and enter on line 13a, on the back.**
- **If line 12 is $15,000 or more, figure your tax using the Tax Computation Worksheet on page 18 of Instructions.**

13a	Tax, check if from: [X] Tax Tables (pages 8–18) OR [ ] Tax Computation Worksheet (page 18)		13a	306 00
b	Credit for personal exemptions (multiply line 6d by $30)		b	30 00
14a	Balance (subtract line 13b from line 13a). If less than zero, enter zero.		14a	276 00
b	Credit for contributions to candidates for public office (see page 7 of Instructions)		b	0 00
15	Income tax (subtract line 14b from line 14a). If less than zero, enter zero.		15	276 00
16a	Total Federal income tax withheld (attach Forms W-2 to front)	16a 413 00		
b	Excess FICA, RRTA, or FICA/RRTA tax withheld (two or more employers—see page 7 of Instructions)	b 0 00		
c	1975 estimated tax payments (include amount allowed as credit from 1974 return)	c 0 00		
d	Earned income credit	d 0 00		
		0 00		
		0 00		
17	Total (add lines 16a, b, c, and d)		17	413 00
18	If line 15 is larger than line 17, enter **BALANCE DUE IRS** ►		18	
19	If line 17 is larger than line 15, enter amount **OVERPAID** ►		19	
20	Amount of line 19 to be **REFUNDED TO YOU** ►		20	
21	Amount of line 19 to be credited on 1976 estimated tax ►	21		

Pay amount on line 18 in full with this return. Write social security number on check or money order and make payable to Internal Revenue Service.

If all of overpayment (line 19) is to be refunded (line 20), make no entry on line 21.

Other Dependents

(a) NAME	(b) Relationship	(c) Months lived in your home. If born or died during year, write B or D.	(d) Did dependent have income of $750 or more?	(e) Amount YOU furnished for dependent's support. If 100% write ALL.	(f) Amount furnished by OTHERS including dependent.
				$	$

22 Total number of dependents listed in column (a). Enter here and on line 6c ►

Under penalties of perjury, I declare that I have examined this return, including accompanying schedules and statements, and to the best of my knowledge and belief it is true, correct and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Sign here

Your signature — Date

Spouse's signature (if filing jointly, BOTH must sign even if only one had income)

Preparer's signature (other than taxpayer) — Date

Address (and ZIP Code)

☆ U.S. GOVERNMENT PRINTING OFFICE : 1975—O-575-394

E I —36271719

99

GO ON TO THE NEXT PAGE.

40. Jill Hansen lives in an apartment all by herself. She wants to keep track of how she spends her money each month. Which list will she find most useful for making a budget?

A.

Rent	$ _____
Utilities	_____
Food	_____
Phone	_____
Medical	_____
Clothes	_____
Transportation	_____
Recreation	_____
Savings	_____
TOTAL	_____

B.

Rent & Utilities	$ _____
Food	_____
Makeup	_____
Movies	_____
Other things	_____
TOTAL	_____

C.

Rent	$ _____
Gas	_____
Electric	_____
Phone	_____
Water	_____
Food	_____
Makeup	_____
Doctor	_____
Dentist	_____
Medicine	_____
Movies	_____
Records	_____
Shoes	_____
Skirts	_____
Sweaters	_____
Pants	_____

D.

Household	$ _____
Personal	_____
Work related	_____
Fun	_____
Bank	_____

100

END OF SURVEY.

BACKGROUND INFORMATION

Your answers to the following 7 questions will be kept strictly confidential. You may, however, omit any questions that you prefer not to answer.

1. How old are you?

   A. 16 or younger
   B. 17
   C. 18
   D. 19
   E. 20 or older

2. Which racial/ethnic group do you belong to?

   A. American Indian or Alaskan Native
   B. Asian or Pacific Islander
   C. Black
   D. Hispanic
   E. White

3. What grade are you in now?

   A. 9
   B. 10
   C. 11
   D. 12

4. What type of program are you in?

   A. Clerical
   B. College-preparatory
   C. General
   D. Vocational-technical
   E. Other

5. What type of high school do you go to?

   A. Private
   B. Public

6. What type of work does the head of your family do?

   A. *Laborer* (car washer, fisherman, longshoreman, etc.)
   B. *Service Worker* (barber or beautician, cook, hospital attendant or orderly, housekeeper, etc.)
   C. *Machine Operator* (bus driver, parking attendant, taxi or truck driver, welder, etc.)
   D. *Craftsman/Foreman* (baker, carpenter, mechanic, plumber, telephone lineman, etc.)
   E. *Sales Worker* (auto salesman, insurance agent, sales clerk, etc.)
   F. *Clerical/Office Worker* (bank teller, secretary, telephone operator, etc.)
   G. *Manager/Official* (building superintendent, public inspector, purchasing agent, railroad conductor, etc.)
   H. *Farmer/Farm Worker*
   J. *Professional/Technical Worker* (actor, doctor, lawyer, musician, pilot, etc.)
   K. Other

7. What is your family's yearly income?

   A. Under $5,000
   B. $5,000 - $6,999
   C. $7,000 - $9,999
   D. $10,000 - $14,999
   E. $15,000 or more

DO NOT OPEN YOUR BOOKLET UNTIL TOLD TO DO SO.

APPENDIX C

REPORT OF ANALYSIS OF APL

COLORADO EXPERIENCE-BASED
CAREER EXPLORATION MODEL 7-10

Jannice J. Cromwell
Project Director
CEBCEM (7-10)
SBCCOE
1525 Sherman
Denver, Co 80203
892-3113

LOCAL COORDINATORS

EAGLE

Doug Johnson
CEBCEM (7-10)
Eagle County
Sch Dist RE50
Eagle, Co 81631
328-6323

HOLYOKE

Don Smith
CEBCEM (7-10)
Holyoke
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854-3363

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Cherie Lyons
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234-7000, Ext 369

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Rocky Ford
Sch Dist R2
P. O. Box 311
(925 Elm Ave)
Rocky Ford, Co 81067
254-7423

July 26, 1979

Linda Jones
CEBCEM Coordinator
Eagle County School District RE50
Eagle, CO 81631

Dear Linda:

Enclosed are copies of the APL print-outs for Eagle. I have separated them into groups: Group One includes information you may desire to maintain:

1. Explanation of Summary Reports
2. School Summary Battle Mountain
   a. 9th Grade Summary
   b. 10th Grade Summary
3. School Summary Minturn Middle
   a. 6th Grade Summary
   b. 7th Grade Summary
   c. 8th Grade Summary
4. School Summary Eagle Valley
   a. 7th Grade Summary
   b. 8th Grade Summary
   c. 9th Grade Summary
   d. 10th Grade Summary
5. District Summary (I compiled)
   (Battle Mt. scores are very unreliable - Standard deviation of 7.57)

1. Approximately 32% of all students tested are prepared as functionally competent adults.

Minturn	Eagle Valley	Battle Mt.
34% of 6th Grade		
16% of 7th Grade	15% of 7th Grade	
28% of 8th Grade	29% of 8th Grade	
	47% of 9th Grade	43% of 9th Grade
	42% of 10th Grade	*27% of 10th Grade

* Major difference unaccountable with 10th grade students at Battle Mt.

2. On the average, Eagle students were most competent in Community Resources and least competent in Consumer Economics.

Percent of students at mastery level:

68% Community Resources
33% Health
54% Occupational Knowledge
32% Government and Law
18% Consumer Economics

Per grade breakdown on percent mastering skill:

	6th	7th	8th	9th	10th
Community Resources	68%	62%	63%	73%	72%
Health	27%	9%	23%	47%	48%
Occupational Knowledge	50%	42%	56%	61%	56%
Government and Law	36%	19%	30%	39%	33%
Consumer Economics	14%	11%	18%	24%	20%

3. Question most frequently missed:
(less than 60% of students selected the correct response)

Community Resources	6 - Facts 7 - Reading	Computation - 6 Facts - 4 Problem Solving - 3 Writing - 3 Reading - 3
Occupational Knowledge	13 - Computation 14 - Facts 15 - Reading 16 - Computation	
Health	19 - Facts 21 - Problem Solving 23 - Computation	
Government and Law	29 - Writing 30 - Writing 31 - Computation 32 - Reading	
Consumer Economics	35 - Facts 36 - Problem Solving 37 - Problem Solving 38 - Computation 39 - Computation 40 - Writing	

Question on:
- 6 - Driving
- 7 - Bus Schedule
- 13 - Overtime Pay
- 14 - Labor Union
- 15 - Occupation match with skills
- 16 - Paying agency fee for finding job
- 19 - Federal food and drug laws
- 21 - High protein foods
- 23 - Reading prescription dosage
- 29 - Letter to Congressman
- 30 - Lease
- 31 - Months served before parole
- 32 - Rights after arrest
- 35 - Credit check
- 36 - Bait and switch
- 37 - Sale rationale
- 38 - Savings on heating oil
- 39 - Income tax refund
- 40 - Making a budget

Group Two:

1. Explanation of Student Report
2. Individual scores of students by grade which your counselors may be able to use.

Students by grade functionally competent in all areas:

6th Grade

(Minturn)

7th Grade

None

8th Grade

(Minturn)
(Eagle Valley)
" "
" "

9th Grade

(Eagle Valley)
" "
* " "
" "

9th Grade (continued)

*
*

(Eagle Valley)
" "
(Battle Mt.)
" "
" "
" "
" "
" "

10th Grade

(Eagle Valley)
" "
" "
" "
" "
" "

* Received highest score 95%

10th Grade (continued)
(Eagle Valley)
(Battle Mt.)
" "
" "

Use this information as you desire. Remember that students need to know how they did. (Are we meeting the needs of Spanish students?)

Sincerely,

Jan

Jannice J. Cromwell
State Director, CEBCEM

JJC/jw

cc: Dr. Glen Rask
Dr. Gene Gallegos

District Summary

Percent competent by Content area:

	C.R.	C.K.	H.	G.&L.	C.E.
Minturn	62%	18%	47%	29%	13%
(139)	86	25	66	41	18
Eagle Valley	73%	33%	57%	32%	22%
(210)	154	70	120	68	46
Battle Mt.	67%	48%	54%	33%	17%
(123)	83	59	67	41	21
(472)	68%	33%	54%	32%	18%
	323	154	253	150	85

Percent of correct responses by items:

	M	E	B	
1.	94	90	87	(90)
2.	92	92	95	(93)
3.	58	75	76	(69)
4.	82	87	77	(82)
5.	87	87	76	(83)
6.	40	64	61	(55)
7.	42	47	[illegible]	(44)
8.	81	84	[illegible]	(81)
9.	74	78	79	(77)
10.	85	87	85	(85)
11.	68	70	84	(74)
12.	66	80	76	(74)
13.	35	48	54	(45)
14.	24	29	42	(31)
15.	32	41	46	(39)
16.	25	33	43	(33)
17.	95	91	89	(91)
18.	83	83	76	(80)
19.	39	66	54	(53)
20.	81	83	74	(79)
21.	27	30	34	(30)
22.	75	75	72	(74)
23.	47	53	50	(50)
24.	77	73	67	(72)
25.	73	71	67	(70)
26.	57	70	63	(63)
27.	82	82	75	(79)
28.	64	63	54	(60)
29.	50	59	47	(52)
30.	51	56	46	(51)
31.	29	30	24	(27)
32.	32	38	27	(32)
33.	91	86	70	(82)
34.	82	84	65	(77)
35.	32	43	36	(37)
36.	40	44	32	(38)
37.	63	59	41	(54)
38.	33	31	26	(30)
39.	14	24	15	(17)
40.	32	36	28	(32)

(Battle Mt. scores are very unreliable)

COLORADO EXPERIENCE-BASED
CAREER EXPLORATION MODEL 7-10

Jannice J. Cromwell
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LOCAL COORDINATORS

EAGLE

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Eagle County
Sch Dist RE50
Eagle, Co 81631
328-6323

HOLYOKE

Don Smith
CEBCEM (7-10)
Holyoke
Sch Dist RE-1J
Morlan & Gordon Sts
Holyoke, Co 80734
854-3363

JEFFERSON COUNTY

Cherie Lyons
CEBCEM (7-10)
Jefferson County
Sch Dist R-1
1209 Quail St
Lakewood, Co 80215
234-7000, Ext 369

ROCKY FORD

Jim Hamm
CEBCEM (7-10)
Rocky Ford
Sch Dist R2
P. O. Box 311
(925 Elm Ave)
Rocky Ford, Co 81067
254-7423

July 20, 1979

Don Smith
CEBCEM Coordinator
Holyoke School District RE-1J
Morlan & Gordon Streets
Holyoke, CO 80734

Dear Don:

Enclosed are copies of the APL print-outs for Holyoke. I have separated them into groups: Group One includes information you may desire to maintain:

1. District Summary
2. 6th Grade Summary
3. 7th Grade Summary
4. 8th Grade Summary
5. 9th Grade Summary
6. 10th Grade Summary

and how to interpret info, too

1. Approximately 50% of all students tested are prepared as functionally competent adults.

23% of 6th grade	- 10	
33% of 7th grade	- 16	11.5
49% of 8th grade	- 19	46
68% of 9th grade	- 1	
69% of 10th grade		

2. 11.5% is the estimated per grade increase for Holyoke - average would have been 15% but either 9th grade performed very high or 10th grade very low. My assumption would be a low participation in Survival Skill Competencies at the 10th grade.

3. On the average, Holyoke students were most competent in Community Resources and least competent in Consumer Economics.

Percent of students at mastery level:

72% Community Resources
63% Health
50% Occupational Knowledge
44% Government and Law
33% Consumer Economics

Per grade breakdown on percent mastering skill:

	6th	7th	8th	9th	10th
Community Resources	47%	69%	59%	84%	91%
Health	40%	53%	65%	74%	73%
Occupational Knowledge	23%	31%	49%	71%	67%
Government and Law	17%	31%	41%	63%	60%
Consumer Economics	17%	24%	37%	55%	44%

4. Question most frequently missed:
(less than 60% of students selected the correct response)

Community Resources	6 - Facts 7 - Reading	Computation - 6 Reading - 3 Facts - 2 Problem Solving - 1 Writing - 1
Occupational Knowledge	13 - Computation 14 - Facts 15 - Reading 16 - Computation	
Health	21 - Problem Solving 23 - Computation	
Government and Law	31 - Computation 32 - Reading	
Consumer Economics	38 - Computation 39 - Computation 40 - Writing	

Question on:
6 - Driving
7 - Bus Schedule
13 - Overtime Pay
14 - Labor Union
15 - Occupation match with skills
16 - Paying agency fee for finding job
21 - High protein foods
23 - Reading prescription dosage
31 - Months served before parole
32 - Rights after arrest
38 - Savings on heating oil
39 - Income tax refund
40 - Making a budget

Group Two - Individual scores of students by grade which your counselors may be able to use. and How to Interpret (over)

Students by grade functionally competent in all areas:

6th Grade

7th Grade

8th Grade

9th Grade

9th Grade (continued)

10th Grade

*1

*Received highest score 100%.

Use this information as you desire. Remember that students need to know how they did.

Sincerely,

Jan

Jannice J. Cromwell
State Director, CEBCEM

JJC/jw

cc. Dr. Allen Pond
Jack Sorenson

COLORADO EXPERIENCE-BASED
CAREER EXPLORATION MODEL 7-10

Jannice J. Cromwell
Project Director
CEBCEM (7-10)
SBCCOE
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HOLYOKE

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ROCKY FORD

Jim Hamm
CEBCEM (7-10)
Rocky Ford
Sch Dist R2
P. O. Box 311
(925 Elm Ave)
Rocky Ford, Co 81067
254-7423

July 26, 1979

Jim Hamm
Western State College
Robideaux Hall, Room 203
Gunnison, CO 81230

Dear Jim:

Enclosed are copies of the APL print-outs for Rocky Ford. I have separated them into groups: Group One includes information you may desire to maintain:

1. Explanation of Summary Reports
2. District Summary
3. 7th Grade Summary
4. 8th Grade Summary
5. 9th Grade Summary
6. 10th Grade Summary

1. Approximately 21% of all students tested are prepared as functionally competent adults.

16% of 7th grade	4	3.25%
20% of 8th grade	0	
20% of 9th grade	9	
29% of10th grade	13%	

2. 3.25% is the estimated per grade increase for Rocky Ford. No increase occurred between 8th and 9th grades. My assumption would be - low participation in Survival Skill Competencies at 9th grade.

3. On the average, Rocky Ford students were most competent in Community Resources and least competent in Consumer Economics.

Percent of students at mastery level:

65% Community Resources
25% Health
40% Occupational Knowledge
21% Government and Law
12% Consumer Economics

Per grade breakdown on percent mastering skill:

	6th	7th	8th	9th	10th
Community Resources		56%	62%	65%	77%
Occupational Knowledge		10%	18%	23%	54%
Health		31%	35%	50%	40%
Government and Law		22%	19%	19%	27%
Consumer Economics		9%	15%	10%	15%

4. Questions most frequently missed:
(less than 60% of students responded correctly)

Community Resources	7 - Reading	Facts - 4 Reading - 3 Writing - 3
Occupational Knowledge	13 - Computation 14 - Facts 15 - Reading 16 - Computation	Computation - 6 Problem Solving - 3
Health	19 - Facts 21 - Problem Solving 23 - Computation	7 = Bus Schedule 13 = Overtime Pay 14 = Labor Unions 15 = Job Ads 16 = Employment Agency Fees 19 = Federal Food and Drug Laws 21 = High Protein Meal 23 = Reading Prescription Label
Government and Law	26 - Facts 29 - Writing 30 - Writing 31 - Computation 32 - Reading	26 = Taxes and Services 29 = Letter to Congressman 30 = Lease 31 = Parole 32 = Rights After Arrest
Consumer Economics	35 - Facts 36 - Problem Solving 37 - Problem Solving 38 - Computation *39 - Computation 40 - Writing	35 = Credit Check 36 = Bait and Switch 37 = Sale Rationale 38 = Heating Oil Consumption 39 = Income Tax Refund 40 = Budget

* lowest - only 14% of students responded correctly

Group Two:

1. Explanation of Student Report
2. Individual scores of students by grade which your counselors may be able to use.

Students by grade functionally competent in all areas:

7th Grade

8th Grade

9th Grade

*

*

10th Grade

*Received highest score 95%

Use this information as desired. Remember that students need to know how they did. (Are we meeting the needs of Spanish students?)

Sincerely,

Jannice Cromwell
State Director, CEBCEM

JC/jw

cc: Dr. Glen Rask
Roland Walters

APPENDIX D

EXPLANATION OF TERMS

EXPLANATION OF TERMS

LIFE SKILLS AREA: concentrates on components which provide students with techniques for effectively developing their personal goals and their community responsibilities, integrating the roles of citizen, family, vocation, and avocation. The focus is on the developmental nature of human growth. Activities encourage recognition of each student as a unique individual while simultaneously teaching common skills necessary to all people. Four components have been identified as part of the Life Skills Area:

(L-CR)-Critical Thinking - The student will develop an increased ability to apply the critical thinking process. (Gather, analyze, interpret information, select from alternatives and evaluate the alternative selected.)

(L-FC)-Functional Citizenship - The student will understand as well as experience the legal rights and responsibilities of a teen-ager in the community.

(L-PD)-Personal/Social Development - The student will begin to show evidence of accepting responsibility for self and his/her own actions.

The student will show increased understanding of group processes, i.e., interacting with peers and working in cooperative group situations.

The student will show a change in attitude reflective of increasing maturity level as a result of interacting with adults and coping with change.

(L-C)-Competencies - The student will be able to perform survival tasks appropriate to and defined by the local community.

CAREER DEVELOPMENT AREA: Components within the Career Development Area relate directly to the student's future role of worker (paid or unpaid). Activities help the student successfully identify, assess, organize and use career information through experiences with people and places in the community and through stud and research within the school setting. Within the Career Development Area, three components have been identified as essential to student success:

(C-CI)-Identifying Career Interests/Abilities - The student will develop increased knowledge of personal intents and abilities as related to career areas.

(C-UW)-Understanding Work - The student will demonstrate increased knowledge of the basic requirements for survival in the world of work.

(C-CK)-Career Knowledge - The student will show increased knowledge of the variety of careers available, the qualifications and benefits of particular careers, preparation needs, and technological changes which influence career opportunities.

EXPERIENCE BASED CAREER EDUCATION -

Life Skills Area and Career Development Area:

ORAL INTERVIEW EVALUATION

PROCEDURE FOR SELECTING EBCE STUDENTS FOR ORAL INTERVIEW:

Sixty students will be randomly selected from the EBCE project to participate in the oral interviews. From each of the four schools participating in the project, fifteen students will be selected. A table of random numbers will be used to determine the numbers of the students drawn. Students from each EBCE project in each school will be alphabetically listed on a page with each assigned a number--beginning at one school with numbers 1-15 and continuing on up through 60 in the other schools.

The control group students will be selected according to a random selection method. Each school will randomly select 15 students from their 7-10 grade population. Names of those already in the EBCE project will be excluded. A total of 60 students will be selected from the four schools.

EACH of the above 120 students shall be administered an ORAL COMMUNICATION test which will be used as a weighting factor for the results of the oral interview.

Each student in both the test and control groups shall be orally interviewed according to a predetermined criteria format. The oral interview shall simulate an actual job interview as much as possible.

ORAL INTERVIEW

Each school shall help establish an interview schedule for both the 15 EBCE students and the 15 control group students. The interviewer shall conduct the interviews in a quiet room undisturbed by normal school traffic or operations. Each interview shall be scheduled for 15 minutes/ maximum. The interviewer shall try to adhere to the schedule as nearly as possible.

RESULTS of the oral interviews for each student will be tabulated. Each students score will then be adjusted according to the Oral Communication weighting factor.

PROCEDURES FOR CONDUCTING EBCE INTERVIEWS:

Remember that an interview consists of a number of stages:

1. Preparations before the interview
2. Start of the interview
3. Body of the interview
4. Ending

The interviewer should ensure that the applicant is not kept waiting unreasonably long, that the interview will be conducted in privacy, and that interruptions like phone calls are kept to a minimum.

The interviewer should quickly put the applicant at ease, not by engaging in "phoney" talk, but by asking matter-of-fact questions showing concern for the applicant. Make him/her feel you are concerned about him/her.

In the body of the interview, the interviewer covers all the important aspects outlined in the form. Try to do it in a natural manner so the applicant does not feel you are simply doing a checklist. It might be helpful to conduct the interview by just barely looking at the form to pick up the main topics. Then later go back and check the appropriate boxes after the applicant has left the room.

Some interviews resemble a court cross-examination. The interviewer fires a series of questions at the applicant who tries to give answers he thinks will impress the interviewer. TRY TO AVOID THIS APPROACH! On the other hand, some interviewers believe that they should simply sit back and allow the applicant to talk freely, almost all the time. Both extremes should be avoided. The interview should be "structured" or "patterned" but at the same time should allow for flexibility. The applicant should be allowed to talk freely, so that the interviewer can get some clues to some of his attitudes and values, but, if he disagrees, the interviewer should skillfully bring the conversation back on the right track. Without making the applicant aware of it, the interviewer should control the flow of the interview. The interviewer should adopt an objective attitude.

An interview should not end abruptly. Before the applicant leaves he should be given the opportunity to ask questions. The applicant should also be thanked for coming to the interview.

Much of the success of an interview depends upon the questionning skill of the interviewer. Here are a few basic guidelines:

1. Ask simple direct questions.
2. Ask only one question at a time. Double-barrelled questions can be confusing.
3. Give the applicant time to answer one question before changing your question to another topic.
4. Restrict the number of questions requiring only "yes" or "no" answers.
5. Avoid "leading" questions, questions which disclose what the interviewer wants to hear.

APPLICANT INTERVIEW FORM

INSTRUCTIONS TO INTERVIEWER

CAREER EDUCATION PROJECT

Please rate the student by determining which box or description most nearly fits the student's reply. Place the appropriate score in the box at the side. Use your best judgment in assigning points where there may be 2-3 points leeway. Usually number of points relates to number of items of criteria in the question.

Since it is not the purpose of this interview to punish students for their lack of communication skills or spontaneity in answering the questions, please feel free to reword the question or to ask another question if the student doesn't understand the question or needs more time. (Be careful not to ask a leading question--one that would lead the student to give a certain reply.)

Explanation to Students: Explain that this is to be conducted as a mock job interview for a company. The student can assume that you are the personnel director in charge of hiring for this company.

The purpose of the interivew is to give the student some job interview experience and at the same time to help us determine how much high school students in general know about some of the areas covered in the interview. The important thing is to be completely honest when answering the questions.

At no time should the student be made to feel that this is a "test." Make the students aware of this fact and tell them that we simply want to provide them a learning opportunity and that we also need their help in determining some of the information. Stress the fact that they may feel free to ask questions at any time if they do not understand what we are asking them.

APPLICANT INTERVIEW FORM

Student's Name_____ Interviewer's Name_____

School_____ Date_____

Age of Student_____ Grade in School_____

1. What is your career area of interest?_____ ☐

States specific job ___(5)
States general area ___(3)
States 2 areas ___(2)
States 3 or more ___(1)
Doesn't Know ___(0)

2. What interests and abilities do you have that make you think you will be successful as a___(career interest)? (What do you know about yourself that . . ?) /If no career interest was given in question one then ask the student to explain an area that he/she is interested in and to tell why he/she is interested in that particular area./

(4-5)	(2-3)	(0-1) ☐
Able to assess own interests and relate it to an occupational area.	Some awareness of interests--doesn't relate them well to an occupational area.	Difficulty in knowing or relating own interests--unable to relate to occupational area.

3. What are some experiences you've had in your area of interest? Tell me about several of them.

(4-5)	(2-3)	(0-1) ☐
Indicated at least three learning experiences.	Indicated two learning experiences	Could only relate one or no experiences.

4. What particular skills or attributes do you feel are necessary to succeed in___(stated career area)?

Which of these skills or attributes do you feel you already have?

Which of these skills or attributes do you feel you still need to acquire?

(4-5)	(2-3)	(1)	(0) ☐
Knows most of skills that are necessary and those he/she presently has or will need to acquire.	Knows a few of the skills that are necessary and those he/she presently has or will need to acquire.	Little or no knowledge of necessary skills but recognizes need for further information.	Little or no knowledge of necessary skills but feels ready to survive.

5. How much have you looked into (explored) this particular career? i.e. What about the future outlook for this occupation?

(4-5)	(2-3)	(0-1)	
Appears to have explored and thought quite extensively about this career.	Has placed some effort into learning more about this career.	Shows little or no actual exploration of this career.	☐

6. Tell me about some experiences you've had this year that have been helpful to you in learning more about yourself and your career?

(5)	(4)	(2-3)	(0)	
Able to relate an experience--shows self understanding	Able to relate an experience--some difficulty relating to self development.	Difficulty in relating an experience.	Unable to relate an experience.	☐

7. If you were seeking employment in ___(your stated career area), what procedures would you follow? Where would you begin after you'd gotten your education, if applicable?--Tell me everything you would do until you were finally hired.

(3-5)	(1-2)	(0-1)	
Understands job-hunting process; importance of want-ads, contacts, applications, interview, appearance. Indicates desire to follow correct procedures.	Understands most aspects of the process. Does not indicate necessity for proper use of each step.	Lack of understanding and need for these skills.	☐

8. Do you have a Social Security card? ___YES(1) ___NO(0) ☐☐
Why do you need one? (0-1)

9. Assume you are at a job site working in your area of interest. After a couple of weeks the foreman begins to act antagonistic towards you, finally telling you that he/she feels that because you are so young it's causing problems (of resentment, etc.) with some of the older emplyees. How would you handle this situation?

(5)	(4)	(2-3)	(0-1)	
Open to finding out what's causing the problem; common-sense approach. Career achievement and desire to maintain job evident.	Shows some intent to determine real cause of problem--willing to remain with job.	Undecided about how to handle the situation.	Indicates desire to quit immediately; no attempt to resolve; lacks job commitment.	☐

10. Which would you rather have as a boss?

(0) man	(0) woman	(1) It doesn't matter	☐

For the following jobs, which would make the best employee?

	(0) man	(0) woman	(1) doesn't matter	
Secretary	___	___	___	
Carpenter	___	___	___	
Company President	___	___	___	
Farmer	___	___	___	
Nurse	___	___	___	Total Points ☐

11. Since our company is interested in your welfare and happiness, if we were to transfer you to a new community to work:

a. Tell me about 2-3 activities in which you would try to get involved ___(0-3)
b. How would you find out about these things? ___(0-1)
(Has learned to utilize community resources)
c. How would you actually get involved? ___(0-1)
(Shows ability to get involved)

Total Points ☐

12. We are concerned with your ability to function in the community. Assume you were to be taken out of your family situation right now and placed in a house to live on your own--what kinds of things have you learned this year that would help you survive on your own? (life skills)

(4-5)	(2-3)	(1-2)	(0)	☐
Readily able to relate 2-3 experiences.	Indicated 2-3 experiences with some difficulty.	Could relate only one experience.	None.	

13. We're concerned that our employees understand money management. How do you set up a budget? (*Factors that determine need, categories, setting priorities, inflation as a budget problem, etc.*)

Do you use a budget or do you plan to budget when you get a job?

(4-5)	(1-3)	(0)	☐
Understands importance of budgeting and regularly practices it or shows intent to practice budgeting.	Doesn't fully understand purpose and need for budgeting.	Lack of understanding of budget process.	

14. If you were purchasing for our firm (or an item for yourself), what are some things you would consider?

(2-3)	(1)	(0)	☐
Understands need to check variety of sources, compare.	Doesn't fully understand buying process.	Lack of understanding of buying process.	

15. Where could you go or what could you do after purchasing an item if you had a problem with it--such as a defect?

(3-4)	(2)	(1)	(0) ☐
Knows specifically where to go for help in solving consumer problems. (Manager, complaint dept., Better Business Bureau, Consumer Protection Laws, etc.)	Has general knowledge of how to deal with consumer complaint (Mentions one source).	Has vague knowledge (simply says, "Take it back," and does not really know what to do after that.	Lack of knowledge.

16. I'd now like to ask you a few questions about some personal responsibilities.

a. Do you know how to file your own income tax? ___YES(1) ___NO (0)
b. Where can you get a tax form? ___ (1) ___ (0)
c. Does everyone in the U.S. pay the same rate or percentage of their income in taxes? ___YES(0) ___NO (1)

Total Points ☐

17. What kinds of services do your property taxes pay for?
/Award points according to number of valid services mentioned such as schools, streets, parks, municipal services, etc. (0-5 pts.) ☐

18. Suppose you were to hear that the U.S. House of Representatives were about to vote on a bill that would force all people employed in your area to have to adhere to some strict safety standard that you felt was not important. You are against this bill.

What can you do about it?
Who should you contact?

(4-5)	(2-3)	(1)	(0) ☐
Knows to write, telegram, petition, or contact a U.S. Congressman or Representative.	Has some knowledge of what to do (lists one of the sources); Knows to contact some governmental agency or person.	Has limited knowledge, Can barely answer one of the two questions.	Lack of knowledge.

APPENDIX E

ANALYSIS OF STUDENT ASSESSMENT

ALAMEDA JUNIOR HIGH | GRADE 9 | TOTAL

N=15

Numbers	Pre	Post	D	D^2
27	115	100	+15	225
22	119	112	+7	49
70	113	88	+25	625
47	103	98	+5	25
82	121	114	+7	49
50	102	94	+8	64
37	92	93	-1	1
56	141	129	+12	144
79	112	96	+16	256
65	108	88	+20	400
54	116	115	+1	1
29	105	111	-6	36
58	105	96	+9	81
62	95	111	-16	256
17	103	108	-5	25
			$\Sigma D = 97$	$\Sigma D^2 = 2237$

$\overline{D} = 6.47$

$\Sigma d^2 = 2237 - \frac{97^2}{15} = 1609.73$

$S_{\overline{D}} = \sqrt{\frac{1609.73}{15\ (14)}} = 2.769$

$T = \frac{6.47}{2.769} = 2.34$

Pre	Mean = 110	Standard Deviation = 11.96
Post	Mean = 103.53	Standard Deviation = 11.75

ALAMEDA JUNIOR HIGH GRADE 9 SECTION 1

N=15

Number	Pre	Post	D	D^2
27	26	18	+8	64
22	29	27	+2	4
70	22	14	+8	64
47	17	15	+2	4
82	30	32	-2	4
50	23	15	+8	64
37	19	15	+4	16
56	44	30	+14	196
79	34	26	+8	64
65	24	21	+3	9
54	24	26	-2	4
29	27	19	+8	64
58	21	19	+2	4
62	22	29	-7	49
17	18	26	-8	64
			$\Sigma D = 48$	$\Sigma D^2 = 674$

$\overline{D} = 3.2$

$\Sigma d^2 = 674 - \frac{48^2}{15} = 520.4$

$S_{\overline{D}} = \sqrt{\frac{520.4}{15\ (14)}} = 1.57$

$T = \frac{3.2}{1.57} = 2.04$

Pre	Mean = 25.33	Standard Deviation = 6.95
Post	Mean = 22.13	Standard Deviation = 6.16

ALAMEDA JUNIOR HIGH | GRADE 9 | SECTION 2

N=15

Number	Pre	Post	D	D^2
27	43	39	+4	16
22	48	47	+1	1
70	46	39	+7	49
47	39	34	+5	25
82	45	38	+7	49
50	35	33	+2	4
37	36	36	0	0
56	52	52	0	0
79	43	28	+15	225
65	43	42	+1	1
54	41	47	-6	36
29	42	45	-3	9
58	38	34	+4	16
62	38	43	-5	25
17	42	43	-1	1
			$\Sigma D = 31$	$\Sigma D^2 = 457$

$\overline{D} = 2.07$

$\Sigma d^2 = 457 - \frac{31^2}{15} = 392.93$

$S_{\overline{D}} = \sqrt{\frac{392.93}{15\ (14)}} = 1.37$

$T = \frac{2.07}{1.37} = 1.51$

Pre	Mean = 42.07	Standard Deviation = 4.56
Post	Mean = 40.0	Standard Deviation = 6.41

ALAMEDA JUNIOR HIGH | GRADE 9 | SECTION 3

N=15

Number	Pre	Post	D	D^2
27	46	43	+3	9
22	42	38	+4	16
70	45	35	+10	100
47	47	49	-2	4
82	46	44	+2	4
50	44	46	+2	4
37	37	42	-5	25
56	45	47	-2	4
79	36	42	-6	36
65	45	45	0	0
54	43	42	+1	1
29	47	47	0	0
58	46	43	+3	9
62	35	39	-4	16
17	43	39	+4	16
			$\Sigma D = 10$	$\Sigma D^2 = 244$

$\overline{D} = .667$

$\Sigma d^2 = 244 - \frac{10^2}{15} = 237.33$

$S_{\overline{D}} = \sqrt{\frac{237.33}{15\ (14)}} = 1.06$

$T = \frac{.667}{1.06} = .629$

Pre	Mean = 43.13	Standard Deviation = 3.98
Post	Mean = 42.73	Standard Deviation = 3.83

WHEATRIDGE JUNIOR HIGH | GRADE 9 | TOTAL

N=15

Number	Pre	Post	D	D^2
90B	116	118	-2	4
92B	103	84	+19	361
95B	104	96	+8	64
96B	115	121	-6	36
97B	103	99	+4	16
98B	102	111	-9	81
01C	106	103	+3	9
05C	104	86	+18	324
16C	105	84	+21	441
17C	96	97	-1	1
18C	105	99	+6	36
20C	117	124	-7	49
21C	101	123	-22	484
23C	97	109	-12	144
25C	108	102	+6	36
			$\Sigma D = 94$	$\Sigma D^2 = 2086$

$\overline{D} = 6.27$

$\Sigma d^2 = 2086 - \frac{94^2}{15} = 1496.93$

$S_{\overline{D}} = \sqrt{\frac{1496.93}{15\ (14)}} = 2.67$

$T = \frac{6.27}{2.67} = 2.348$

Pre	Mean = 105.47	Standard Deviation = 6.28
Post	Mean = 103.73	Standard Deviation =13.67

WHEATRIDGE JUNIOR HIGH GRADE 9 SECTION 1

N=15

Number	Pre	Post	D	D^2
90B	31	26	+5	25
92B	19	15	+4	16
95B	18	22	-4	16
96B	25	34	-9	81
97B	30	31	-1	1
98B	17	23	-6	36
01C	26	38	-14	196
05C	31	16	+15	225
16C	17	12	+5	25
17C	22	20	+2	4
18C	18	13	+5	25
20C	30	35	-5	25
21C	17	36	-19	361
23C	21	24	-3	9
25C	25	17	+8	64
			$\Sigma D=-17$	$\Sigma D^2=1098$

$\bar{D} = 1.133$

$\Sigma d^2 = 1098 - \frac{17^2}{15} = 1078.73$

$S_{\bar{D}} = \sqrt{\frac{1078.73}{15\ (14)}} = 2.267$

$T = \frac{1.133}{2.267} = .50$

Pre	Mean = 23.13	Standard Deviation = 5.49
Post	Mean = 24.13	Standard Deviation = 8.84

WHEATRIDGE JUNIOR HIGH | GRADE 9 | SECTION 2

N=15

Number	Pre	Post	D	D^2
90B	50	46	+4	16
92B	41	29	+12	144
95B	40	31	+9	81
96B	44	42	+2	4
97B	34	27	+7	49
98B	42	43	-1	1
01C	36	27	+9	81
05C	28	27	+1	1
16C	43	29	+14	196
17C	35	32	+3	9
18C	40	37	+3	9
20C	46	45	+1	1
21C	43	43	0	0
23C	40	36	+4	16
25C	38	38	0	0
			D= 68	D^2= 607

$\bar{D} = 4.53$

$d^2 = 607 - \frac{68^2}{15} = 298.73$

$S_{\bar{D}} = \frac{\sqrt{298.73}}{15\,(14)} = 1.192$

$T = \frac{4.53}{1.19} = 3.80$

Pre	Mean = 37	Standard Deviation = 9.96
Post	Mean = 35.47	Standard Deviation = 7.06

WHEATRIDGE JUNIOR HIGH | GRADE 9 | SECTION 3

N=15

Number	Pre	Post	D	D^2
90B	35	46	-11	121
92B	43	40	+3	9
95B	46	43	+3	9
96B	46	45	+1	1
97B	39	41	-2	4
98B	43	45	-2	4
01C	44	38	+4	16
05C	45	43	+2	4
16C	45	43	+2	4
17C	39	45	-6	36
18C	47	49	-2	4
20C	41	44	-3	9
21C	41	44	-3	9
23C	36	49	-13	169
25C	45	49	-2	4
			$\Sigma D=-29$	$\Sigma D^2=403$

$\bar{D} = 1.93$

$\Sigma d^2 = 403 - \frac{29^2}{15} = 346.93$

$S_{\bar{D}} = \sqrt{\frac{346.93}{15\ (14)}} = 1.29$

$T = \frac{1.93}{1.29} = 1.496$

Pre	Mean = 42.33	Standard Deviation = 3.72
Post	Mean = 44.13	Standard Deviation = 3.04

HOLYOKE

Summary

	Pre Mean	Pre Standard Deviation	Post Mean	Post Standard Deviation	Total
GRADE 7					
Total	96.57	26.79	107.29	7.67	1.50
Section 1	22.4	6.54	22.13	4.22	.09
Section 2	43.29	3.97	42.00	3.16	1.31
Section 3	38.43	6.03	42.86	3.70	2.57
GRADE 8					
Total	111.2	12.74	108.53	14.09	1.09
Section 1	26.2	4.87	24.4	7.14	1.78
Section 2	42.07	7.52	41.0	7.92	.6º
Section 3	42.93	4.77	43.13	5.12	.24
GRADE 9					
Total	110	7.40	105.27	7.06	2.78
Section 1	24.13	4.54	20.8	3.51	3.14
Section 2	41.6	3.87	40.53	4.34	.927
Section 3	44.27	3.47	45.06	4.30	.714
GRADE 10					
Total	109.07	9.69	103.93	8.04	2.87
Section 1	23.87	5.99	22.93	4.83	.53
Section 2	41.33	4.15	39.0	4.90	2.40
Section 3	43.53	4.87	42.0	4.93	1.65

HOLYOKE GRADE 7 TOTAL

N=14

Number	Pre	Post	D	D^2
105	98	96	+2	4
091	96	99	-3	9
100	107	110	-3	9
092	82	114	-32	1024
116	100	107	-7	49
134	117	97	+10	100
122	122	114	+8	64
130	98	103	-5	25
124	95	111	-16	256
128	Not Complete	---	---	---
110	105	120	-15	225
095	101	106	-5	25
113	108	107	+1	1
099	103	110	-7	49
107	110	94	+6	36
			$\sum D=-66$	$\sum D^2=1876$

$\overline{D} = 4.4$

$\sum d^2 = 1876 - \frac{66^2}{14} = 1564.86$

$S_{\overline{D}} = \sqrt{\frac{1564.86}{14\ (13)}} = 2.93$

$T = 1.50$

Pre	Mean = 96.57	Standard Deviation = 26.79
Post	Mean =106.29	Standard Deviation = 7.67

HOLYOKE GRADE 7 SECTION 1

N=15

Number	Pre	Post	D	D^2
105	14	14	0	
091	18	20	-2	4
100	23	21	+2	4
092	21	27	-6	36
116	26	22	+4	16
134	27	16	+9	81
122	32	27	+5	25
130	17	23	-6	36
124	18	23	-5	25
128	38	29	+9	81
110	20	25	-5	25
095	21	25	-4	16
113	18	23	-5	25
099	16	19	-3	9
107	27	18	+9	81
			$\Sigma D = 2$	$\Sigma D^2 = 464$

$\overline{D} = .133$

$\Sigma d^2 = 464 - \frac{2^2}{15} = 463.73$

$S_{\overline{D}} = \sqrt{\frac{463.73}{15\ (14)}} = 1.49$

$T = \frac{.133}{1.49} = .09$

Pre	Mean = 22.4	Standard Deviation = 6.54
Post	Mean = 22.13	Standard Deviation = 4.22

HOLYOKE GRADE 7 SECTION 2

N=14

Number	Pre	Post	D	D^2
105	44	39	+5	25
091	41	40	+1	1
100	43	45	-2	4
092	40	42	-2	4
116	33	39	-6	36
134	44	37	+7	49
122	45	43	+2	4
130	43	37	+6	36
124	42	43	-1	1
128	Not Complete	45	--	--
110	43	45	-2	4
095	43	43	0	0
113	48	43	+5	25
099	49	48	+1	1
107	48	41	+7	49
			$\Sigma D=21$	$\Sigma D^2=239$

$\overline{D} = 1.4$

$\Sigma d^2 = 239 - \frac{21^2}{14} = 207.5$

$S_{\overline{D}} = \sqrt{\frac{207.5}{14\ (13)}} = 1.07$

$T = \frac{1.4}{1.07} = 1.31$

Pre	Mean = 43.29	Standard Deviation = 3.97
Post	Mean = 42	Standard Deviation = 3.16

HOLYOKE GRADE 7 SECTION 3

N=14

Number	Pre	Post	D	D^2
105	40	43	-3	9
091	37	39	-2	4
100	41	44	-3	9
092	21	45	-24	576
116	41	46	-5	25
134	46	44	-2	4
122	45	44	+1	1
130	38	43	-5	25
124	35	45	-10	100
128	Not Complete	--	---	---
110	42	50	-8	64
095	37	38	-1	1
113	42	41	+1	1
099	38	43	-5	25
107	35	35	0	0
			$\sum D=-66$	$\sum D^2=844$

$\bar{D} = 4.4$

$\sum d^2 = 844 - \frac{66^2}{14} = 532.86$

$S_{\bar{D}} = \sqrt{\frac{532.86}{14\ (13)}} = 1.71$

$T = \frac{4.4}{1.71} = 2.57$

Pre	Mean = 38.43	Standard Deviation = 6.03
Post	Mean = 42.86	Standard Deviation = 3.70

HOLYOKE GRADE 8 TOTAL

N=15

Number	Pre	Post	D	D^2
084	103	91	+12	144
069	85	107	-22	484
070	111	102	+9	81
073	114	114	0	0
062	129	134	-5	25
050	116	104	+12	144
058	114	98	+16	256
079	87	85	+2	4
060	130	134	-4	16
066	119	118	+1	1
056	101	97	+4	16
047	112	105	+7	49
089	116	122	-6	36
082	115	109	+6	36
072	116	108	+8	64
			$\sum D = 40$	$\sum D^2 = 1356$

$\overline{D} = 2.67$

$\sum d^2 = 1356 - \frac{40^2}{15} = 1249.33$

$S_{\overline{D}} = \sqrt{\frac{1249.33}{15\,(14)}} = 2.44$

$T = \frac{2.67}{2.44} = 1.09$

Pre	Mean = 111.2	Standard Deviation = 12.74
Post	Mean = 108.53	Standard Deviation = 14.09

HOLYOKE GRADE 8 SECTION 1

N=15

Number	Pre	Post	D	D^2
084	23	15	+8	64
069	21	22	-1	1
070	27	25	+2	4
073	26	23	+3	9
062	37	38	-1	1
050	26	22	+4	16
058	25	20	+5	25
079	29	24	+5	25
060	34	39	-5	25
066	27	24	+3	9
056	17	16	+1	1
047	25	22	+3	9
089	28	34	-6	36
082	22	22	0	0
072	26	20	+6	36
			$\sum D=27$	$\sum D^2=261$

$\overline{D} = 1.8$

$\sum d^2 = 261 - \frac{27^2}{15} = 212.4$

$S_{\overline{D}} = \sqrt{\frac{212.4}{15\ (14)}} = 1.01$

$T = 1.78$

Pre	Mean = 26.2	Standard Deviation = 4.87
Post	Mean = 24.4	Standard Deviation = 7.14

HOLYOKE GRADE 8 SECTION 2

N=15

Number	Pre	Post	D	D^2
084	36	27	+9	81
069	29	39	-10	100
070	43	35	+8	64
073	42	46	-4	16
062	52	51	+1	1
050	47	45	+2	4
058	39	28	+11	121
079	26	30	-6	36
060	52	51	+1	1
066	49	46	+3	9
056	38	39	-1	1
047	45	44	+1	1
089	44	44	0	0
082	43	49	-6	36
072	46	41	+5	25
			$\sum D=14$	$\sum D^2=496$

$\bar{D} = .93$

$\sum d^2 = 496 - \frac{14^2}{15} = 378.4$

$S_{\bar{D}} = \sqrt{\frac{378.4}{15\ (14)}} = 1.34$

$T = \frac{.93}{1.34} = .69$

Pre	Mean = 42.07	Standard Deviation = 7.52
Post	Mean = 41.00	Standard Deviation = 7.92

HOLYOKE GRADE 8 SECTION 3

N=15

Number	Pre	Post	D	D^2
084	44	49	-5	25
069	35	46	-11	121
070	41	42	-1	1
073	46	45	-1	1
062	40	45	-5	25
050	43	37	+6	36
058	50	50	0	0
079	32	31	+1	1
060	44	44	0	0
066	43	48	-5	25
056	46	42	+4	16
047	42	39	+3	9
089	44	44	0	0
082	50	38	+12	144
072	44	47	-3	9
			$\sum D=-5$	$\sum D^2=413$

$\overline{D} = .33$

$\sum d^2 = 413 - \frac{5^2}{15} = 411.33$

$S_{\overline{D}} = \sqrt{\frac{411.33}{15\ (14)}} = 1.40$

$T = \frac{.33}{1.40} = .236$

Pre	Mean = 42.93	Standard Deviation = 4.77
Post	Mean = 43.13	Standard Deviation = 5.12

HOLYOKE GRADE 9 TOTAL

N=15

Number	Pre	Post	D	D^2
002	113	112	+1	1
011	110	119	+9	81
020	106	88	+18	324
006	95	103	-8	64
034	122	103	+19	361
036	98	101	-3	9
037	117	110	+7	49
025	105	103	+2	4
022	108	104	+4	16
035	116	102	+14	196
024	119	100	+19	361
004	111	111	0	0
018	106	105	+1	1
023	114	111	+3	9
001	110	107	+3	9
			$\sum D = 89$	$\sum D^2 = 1485$

$\overline{D} = 5.93$

$\sum d^2 = 1485 - \frac{59^2}{15} = 956.93$

$S_{\overline{D}} = \sqrt{\frac{956.93}{15\,(14)}} = 2.13$

$T = \frac{5.93}{2.13} = 2.78$

Pre	Mean = 110	Standard Deviation = 7.40
Post	Mean = 105.27	Standard Deviation = 7.06

HOLYOKE GRADE 9 SECTION 1

N=15

Number	Pre	Post	D	D^2
002	25	21	+4	16
011	21	22	-1	1
020	20	18	+2	4
006	20	16	+4	16
034	33	16	+7	49
036	27	21	+6	36
037	31	30	+1	1
025	19	22	-3	9
022	26	20	+6	36
035	23	17	+6	36
024	27	24	+3	9
004	16	20	-4	16
018	23	21	+2	4
023	25	21	+4	16
001	26	23	+3	9
			$\sum D = 40$	$\sum D^2 = 258$

$\bar{D} = 2.667$

$\sum d^2 = 258 - \frac{40^2}{15} = 151.33$

$S_{\bar{D}} = \sqrt{\frac{151.33}{15\ (14)}} = .849$

$T = \frac{2.667}{.849} = 3.14$

Pre	Mean = 24.13	Standard Deviation = 4.54
Post	Mean = 20.8	Standard Deviation = 3.51

HOLYOKE GRADE 9 SECTION 2

N=15

Number	Pre	Post	D	D^2
002	41	41	0	0
011	45	46	-1	1
020	43	41	+2	4
006	34	41	-7	49
034	44	43	+1	1
036	34	36	-2	4
037	42	33	+9	81
025	41	42	-1	1
022	41	43	-2	4
035	47	44	+3	9
024	46	36	+10	100
004	42	38	+4	16
018	38	35	+3	9
023	45	49	-4	16
001	41	40	+1	1
			$\sum D = 16$	$\sum D^2 = 296$

$\overline{D} = 1.067$

$\sum d^2 = 296 - \frac{16^2}{15} = 278.93$

$S_{\overline{D}} = \sqrt{\frac{278.93}{15\ (14)}} = 1.15$

$T = \frac{1.067}{1.15} = .927$

Pre	Mean = 41.60	Standard Deviation = 3.87
Post	Mean = 40.53	Standard Deviation = 4.34

HOLYOKE GRADE 9 SECTION 3

N=15

Number	Pre	Post	D	D^2
002	47	50	-3	9
011	44	51	-7	49
020	43	46	-3	9
006	41	46	-5	25
034	45	44	+1	1
036	37	44	-7	49
037	44	47	-3	9
025	45	39	+6	36
022	41	41	0	0
035	46	41	+5	25
024	46	40	+6	36
004	53	53	0	0
018	45	49	-4	16
023	44	41	+3	9
001	43	44	-1	1
			$\sum D=-12$	$\sum D^2=273$

$\bar{D} = .8$

$\sum d^2 = 273 - \frac{12^2}{15} = 263.4$

$S_{\bar{D}} = \sqrt{\frac{263.4}{15\ (14)}} = 1.12$

$T = \frac{.8}{1.12} = .714$

Pre	Mean = 44.27	Standard Deviation = 3.47
Post	Mean = 45.06	Standard Deviation = 4.30

HOLYOKE GRADE 10 TOTAL

N=15

Number	Pre	Post	D	D^2
177	126	108	+18	324
140	106	113	-7	49
150	96	94	+2	4
136	108	101	+7	49
163	101	99	+2	4
135	116	116	0	0
145	103	100	+3	9
143	103	97	+6	36
171	108	105	+3	9
157	111	109	+2	4
139	106	109	-3	9
160	117	102	+15	225
181	103	100	+3	9
161	101	89	+12	144
154	131	117	+14	196
			$\sum D = 77$	$\sum D^2 = 1071$

$\overline{D} = 5.13$

$\sum d^2 = 1071 - \frac{77^2}{15} = 675.73$

$S_{\overline{D}} = \sqrt{\frac{675.73}{15\ (14)}} = 1.79$

$T = \frac{5.13}{1.79} = 2.87$

Pre	Mean = 109.07	Standard Deviation = 9.69
Post	Mean = 103.93	Standard Deviation = 8.04

HOLYOKE GRADE 10 SECTION 1

N=15

Number	Pre	Post	D	D^2
177	36	24	+12	144
140	22	24	-2	4
159	20	18	+2	4
136	21	19	+2	4
163	22	19	+3	9
135	29	32	-3	9
145	20	17	+3	9
143	21	29	-8	64
171	12	25	-13	169
157	25	27	-2	4
139	23	28	-5	25
160	27	16	+11	121
181	20	19	+1	1
161	26	22	+4	16
154	34	25	+9	81
			$\sum D = 14$	$\sum D^2 = 664$

$\bar{D} = .93$

$\sum d^2 = 664 - \frac{14^2}{15} = 650.93$

$S_{\bar{D}} = \sqrt{\frac{650.93}{15\ (14)}} = 1.76$

$T = \frac{.93}{1.76} = .53$

Pre	Mean = 23.87	Standard Deviation = 5.99
Post	Mean = 22.93	Standard Deviation = 4.83

HOLYOKE GRADE 10 SECTION 2

N=15

Number	Pre	Post	D	D^2
177	39	40	-1	1
140	40	40	0	0
159	40	41	-1	1
136	40	35	+5	25
163	37	33	+4	16
135	46	46	0	0
145	36	38	-2	4
143	43	31	+12	144
171	39	35	+4	16
157	49	44	+5	25
139	41	44	-3	9
160	44	42	+2	4
181	41	37	+4	16
161	36	33	+3	9
154	49	46	+3	9
			$\sum D = 35$	$\sum D^2 = 279$

$\bar{D} = 2.33$

$\sum d^2 = 279 - \frac{35^2}{15} = 197.33$

$S_{\bar{D}} = \sqrt{\frac{197.33}{15\ (14)}} = .969$

$T = \frac{2.33}{.969} = 2.40$

Pre	Mean = 41.33	Standard Deviation = 4.15
Post	Mean = 39.0	Standard Deviation = 4.90

HOLYOKE GRADE 10 SECTION 3

N=15

Number	Pre	Post	D	D^2
177	51	44	+7	49
140	44	49	-5	25
159	36	35	+1	1
136	47	47	0	0
163	42	47	-5	25
135	41	38	+3	9
145	47	45	+2	4
143	39	37	+2	4
171	52	45	+7	49
157	37	38	-1	1
139	42	37	+7	49
160	46	44	+2	4
181	42	44	-2	4
161	39	34	+5	25
154	48	46	+2	4
			$\sum D = 25$	$\sum D^2 = 253$

$\bar{D} = 1.67$

$\sum d^2 = 253 - \frac{25^2}{15} = 211.33$

$S_{\bar{D}} = \sqrt{\frac{211.33}{15\ (14)}} = 1.01$

$T = \frac{1.67}{1.01} = 1.65$

Pre	Mean = 43.53	Standard Deviation = 4.87
Post	Mean = 42.0	Standard Deviation = 4.93

MINTURN MIDDLE

Summary

	Pre Mean	Pre Standard Deviation	Post Mean	Post Standard Deviation	Total
GRADE 7					
Total	109.67	12.42	115.07	12.93	.44
Section 1	28.07	6.03	28.47	6.17	.40
Section 2	42.53	4.24	43.47	4.90	.61
Section 3	39.07	5.23	44.46	5.04	3.63
GRADE 8					
Total	106.87	12.22	106.4	9.50	1.00
Section 1	24.8	7.89	24.4	4.71	.68
Section 2	42.33	4.61	39.60	4.47	1.99
Section 3	39.07	6.20	42.4	5.53	3.74

MINTURN MIDDLE GRADE 7 TOTAL

N=15

Number	Pre	Post	D	D^2
962	112	116	-4	16
953	111	118	-7	49
971	102	108	-6	36
999	102	126	-20	40
975	129	134	-5	25
988	103	121	-17	289
995	91	89	+2	4
956	121	118	+3	9
976	103	110	-7	49
978	104	86	+18	324
951	100	120	-20	400
973	133	126	+7	49
966	103	113	-10	100
04A	103	121	-18	324
984	128	120	+8	64
			$\sum D=-76$	$\sum D^2=1778$

$\overline{D} = 1.13$

$\sum d^2 = 1778 - \frac{76^2}{15} = 1392.93$

$S_{\overline{D}} = \sqrt{\frac{1392.93}{15\ (14)}} = 2.58$

$T = \frac{1.13}{2.58} = .44$

Pre	Mean = 109.67	Standard Deviation = 12.42
Post	Mean = 115.07	Standard Deviation = 12.93

MINTURN MIDDLE GRADE 7 SECTION 1

N=15

Number	Pre	Post	D	D^2
962	30	36	-6	36
953	31	26	+5	25
971	26	24	+2	4
999	25	29	-4	16
975	37	38	-1	1
988	22	26	-4	16
995	19	16	+3	9
956	34	27	+7	49
976	22	29	-7	49
978	25	26	-1	1
951	22	23	-1	1
973	40	40	0	0
966	26	28	-2	4
04A	30	33	-3	9
984	32	26	+6	36
			$\sum D=-6$	$\sum D^2=207$

$\bar{D} = .4$

$\sum d^2 = 207 - \frac{6^2}{15} = 204.6$

$S_{\bar{D}} = \sqrt{\frac{204.6}{15\ (14)}} = .99$

$T = \frac{.4}{.99} = .40$

Pre	Mean = 28.07	Standard Deviation = 6.03
Post	Mean = 28.47	Standard Deviation = 6.17

MINTURN MIDDLE GRADE 7 SECTION 2

N=15

Number	Pre	Post	D	D^2
962	45	42	+3	9
953	41	49	-8	64
971	46	49	-3	9
999	40	51	-9	81
975	43	47	-4	16
988	48	45	+3	9
995	38	33	+5	25
956	45	47	-2	4
976	43	42	+1	1
978	41	36	+5	25
951	41	43	-2	4
973	48	41	+7	49
966	37	41	-4	16
04A	34	41	-7	49
984	48	45	+3	9
			$\sum D=-12$	$\sum D^2=370$

$\overline{D} = .8$

$\sum d^2 = 370 - \frac{12^2}{15} = 360.4$

$S_{\overline{D}} = \sqrt{\frac{360.4}{15\ (14)}} = 1.31$

$T = \frac{.8}{1.31} = .61$

Pre	Mean = 42.53	Standard Deviation = 4.24
Post	Mean = 43.47	Standard Deviation = 4.90

MINTURN MIDDLE GRADE 7 SECTION 3

N=15

Number	Pre	Post	D	D^2
962	37	38	-1	1
953	39	43	-4	16
971	30	35	-5	25
999	37	46	-9	81
975	49	49	0	0
985	33	50	-17	289
998	34	40	-6	36
956	42	44	-2	4
976	38	39	+1	1
978	38	44	-6	36
951	37	54	-17	289
973	45	45	0	0
966	40	44	-4	16
04A	39	47	-8	64
984	48	49	-1	1
			$\sum D=-79$	$\sum D^2=859$

$\overline{D} = 5.27$

$\sum d^2 = 859 - \frac{79^2}{15} = 442.93$

$S_{\overline{D}} = \sqrt{\frac{442.93}{15\ (14)}} = 1.45$

$T = \frac{5.27}{1.45} = 3.63$

Pre	Mean = 39.07	Standard Deviation = 5.23
Post	Mean = 44.46	Standard Deviation = 5.04

MINTURN MIDDLE GRADE 8 TOTAL

N=15

Number	Pre	Post	D	D^2
903	116	99	+17	289
916	118	111	+7	49
891	108	106	+2	4
894	112	105	+7	49
927	119	118	+1	1
920	96	111	-15	255
899	91	106	-15	255
942	113	105	+8	64
932	117	122	-5	25
889	93	100	-7	49
908	111	110	+1	1
901	111	121	-10	100
904	122	96	-26	676
941	84	98	-14	196
922	92	88	+4	16
			$\sum D=-45$	$\sum D^2=2029$

$\overline{D} = 3$

$\sum d^2 = 2029 - \frac{45^2}{15} = 1894$

$S_{\overline{D}} = \sqrt{\frac{1894}{15\ (14)}} = 3.00$

$T = \frac{3}{3} = 1$

Pre	Mean = 106.87	Standard Deviation = 12.22
Post	Mean = 106.4	Standard Deviation = 9.50

MINTURN MIDDLE GRADE 8 SECTION 1

N=15

Number	Pre	Post	D	D^2
903	34	22	+12	144
916	35	30	+5	25
891	20	20	0	0
894	26	17	-9	81
927	30	32	-2	4
920	20	27	-7	49
899	26	31	-5	25
942	29	23	+6	36
932	29	27	+2	4
889	26	24	-2	4
908	22	24	-2	4
901	31	28	+3	9
904	35	18	+17	289
941	17	19	-2	4
922	22	24	-2	4
			$\sum D = 18$	$\sum D^2 = 682$

$\overline{D} = 1.2$

$\sum d^2 = 682 - \frac{18^2}{15} = 660.4$

$S_{\overline{D}} = \sqrt{\frac{660.4}{15\ (14)}} = 1.77$

$T = \frac{1.2}{1.77} = .68$

Pre	Mean = 24.8	Standard Deviation = 7.89
Post	Mean = 24.4	Standard Deviation = 4.71

MINTURN MIDDLE GRADE 8 SECTION 2

N=15

Number	Pre	Post	D	D^2
903	50	33	+17	289
916	43	45	-2	4
891	46	38	+8	64
894	45	42	+3	9
927	44	47	-3	9
920	40	41	-1	1
899	40	37	+3	9
942	43	41	+2	4
932	46	47	-1	1
889	38	36	+2	4
908	39	40	-1	1
901	49	40	+9	81
904	42	39	+3	9
941	33	35	-2	4
922	37	33	+4	16
			$\Sigma D = 41$	$\Sigma D^2 = 505$

$\overline{D} = 2.733$

$\Sigma d^2 = 505 - \frac{41^2}{15} = 392.9$

$S_{\overline{D}} = \sqrt{\frac{392.9}{15\ (14)}} = 1.37$

$T = \frac{2.733}{1.37} = 1.99$

Pre	Mean = 42.33	Standard Deviation = 4.61
Post	Mean = 39.6	Standard Deviation = 4.47

MINTURN MIDDLE GRADE 8 SECTION 3

N=15

Number	Pre	Post	D	D^2
903	32	44	-12	144
916	40	36	+4	16
891	42	48	-6	36
894	41	46	-5	25
927	45	39	+6	36
920	36	43	-7	49
899	45	38	+7	49
942	41	41	0	0
932	42	48	-6	36
889	29	40	-11	121
908	50	46	+4	16
901	31	53	-22	484
904	45	39	+6	36
941	34	44	-10	100
922	33	31	+2	4
			$\Sigma D=-50$	$\Sigma D^2=1152$

$\overline{D} = 3.33$

$\Sigma d^2 = 1152 - \frac{50^2}{15} = 166.67$

$S_{\overline{D}} = \sqrt{\frac{166.67}{15\ (14)}} = .89$

$T = \frac{3.33}{.89} = 3.74$

Pre	Mean = 39.07	Standard Deviation = 6.20
Post	Mean = 42.4	Standard Deviation = 5.53

BATTLE MOUNTAIN

Summary

	Pre Mean	Pre Standard Deviation	Post Mean	Post Standard Deviation	Total
GRADE 9					
Total	102.2	8.01	98.73	7.92	1.56
Section 1	22.07	5.19	18.6	3.11	2.79
Section 2	39.4	4.39	38.53	4.82	1.47
Section 3	40.27	5.61	41.93	6.46	.54
GRADE 10					
Total	100.67	8.76	98.33	14.25	.70
Section 1	20.07	4.85	19.93	4.57	.10
Section 2	39.13	4.94	37.87	4.76	1.09
Section 3	41	7.65	43.2	8.65	1.36

BATTLE MOUNTAIN GRADE 9 TOTAL

N=15

Number	Pre	Post	D	D^2
854	116	99	+17	289
834	116	102	+14	196
864	103	110	-7	49
868	106	104	+2	4
856	96	98	-2	4
882	104	100	+4	16
862	98	100	-2	4
881	109	101	+8	64
833	89	99	-10	100
871	97	101	-4	16
830	98	86	+12	144
884	97	80	+17	289
887	103	97	+6	36
828	92	93	-1	1
873	109	111	-2	4
			$\sum D=52$	$\sum D^2=1216$

$\bar{D} = 3.47$

$\sum d^2 = 1216 - \frac{52^2}{15} = 1035.73$

$S_{\bar{D}} = \sqrt{\frac{1035.73}{15\ (14)}} = 2.22$

$T = \frac{3.47}{2.22} = 1.56$

Pre	Mean = 102.2	Standard Deviation = 8.01
Post	Mean = 98.73	Standard Deviation = 7.92

BATTLE MOUNTATAIN GRADE 9 SECTION 1

N=15

Number	Pre	Post	D	D^2
854	37	22	+15	225
834	27	25	+2	4
864	19	21	-3	9
868	17	13	+4	16
856	21	19	+2	4
882	24	18	+6	36
862	20	16	+4	16
881	20	15	+5	25
833	19	17	+2	4
871	17	22	-5	25
830	18	16	+2	4
884	27	17	+10	100
887	23	20	+3	9
828	20	19	+1	1
873	22	19	+3	9
			$\Sigma D=51$	$\Sigma D^2=487$

$\overline{D} = 3.4$

$\Sigma d^2 = 487 - \frac{51^2}{15} = 313.6$

$S_{\overline{D}} = \sqrt{\frac{313.6}{15\ (14)}} = 1.22$

$T = \frac{3.4}{1.22} = 2.786$

Pre	Mean = 22.07	Standard Deviation = 5.19
Post	Mean = 18.6	Standard Deviation = 3.11

BATTLE MOUNTAIN GRADE 9 SECTION 2

N=15

Number	Pre	Post	D	D^2
854	47	40	+7	49
834	41	46	+5	25
864	42	39	+3	9
868	39	40	-1	1
856	42	39	+3	9
882	42	41	+1	1
862	39	37	+2	4
881	44	44	0	0
833	31	31	0	0
871	35	40	-5	25
830	40	34	+6	36
884	34	27	+7	49
887	40	38	+2	4
828	33	40	-7	49
873	42	42	0	0
			$\sum D=23$	$\sum D^2=261$

$\overline{D} = 1.53$

$\sum d^2 = 261 - \frac{23^2}{15} = 225.73$

$S_{\overline{D}} = \sqrt{\frac{225.73}{15\ (14)}} = 1.04$

$T = \frac{1.53}{1.04} = 1.47$

Pre	Mean = 39.4	Standard Deviation = 4.39
Post	Mean = 38.53	Standard Deviation = 4.82

BATTLE MOUNTAIN GRADE 9 SECTION 3

N=15

Number	Pre	Post	D	D^2
854	32	37	-5	25
834	48	31	+17	289
864	42	50	-8	64
868	50	51	-1	1
856	33	41	-8	64
882	38	40	-2	4
862	39	41	-2	4
881	45	47	+2	4
833	39	42	-3	9
871	45	51	-6	36
830	40	39	+1	1
884	36	36	0	0
887	40	39	+1	1
828	39	34	+5	25
873	45	50	-5	25
			$\Sigma D = -14$	$\Sigma D^2 = 617$

$\overline{D} = .933$

$\Sigma d^2 = 617 - \frac{14^2}{15} = 603.93$

$S_{\overline{D}} = \sqrt{\frac{603.93}{15\ (14)}} = 1.70$

$T = \frac{.933}{1.70} = .54$

Pre	Mean = 40.27	Standard Deviation = 5.61
Post	Mean = 41.93	Standard Deviation = 6.46

BATTLE MOUNTAIN GRADE 10 TOTAL

N=15

Numbers	Pre	Post	D	D^2
801	112	124	-12	144
755	106	94	+12	144
766	118	108	+10	100
786	107	113	-6	36
809	98	109	-11	121
794	99	99	0	0
756	93	92	+1	1
776	102	93	+9	81
788	95	94	+1	1
764	95	60	+35	1225
759	95	86	+9	81
757	97	103	-6	36
775	112	99	+13	169
817	96	100	-4	16
793	85	101	-16	256
			$\Sigma D=35$	$\Sigma D^2=2411$

$\bar{D} = 2.33$

$\Sigma d^2 = 2411 - \frac{35^2}{15} = 2329.33$

$S_{\bar{D}} = \sqrt{\frac{2329.33}{15\ (14)}} = 3.33$

$T = .70$

Pre	Mean = 100.67	Standard Deviation = 8.76
Post	Mean = 98.33	Standard Deviation =14.25

BATTLE MOUNTAIN GRADE 10 SECTION 1

N=15

Number	Pre	Post	D	D^2
801	17	22	-5	25
755	21	15	+6	36
766	22	20	+2	4
786	24	12	+12	144
809	20	22	-2	4
794	27	26	+1	1
756	17	19	-2	4
776	20	22	-2	4
788	17	14	+3	9
764	13	18	-5	25
759	17	14	+3	9
757	23	25	-2	4
775	30	27	+3	9
817	21	22	-1	1
793	12	21	-9	81
			$\sum D = 2$	$\sum D^2 = 360$

$\bar{D} = .133$

$\sum d^2 = 359.73$

$S_{\bar{D}} = \sqrt{\frac{359.73}{15\ (14)}} = 1.31$

$T = \frac{.133}{1.31} = .10$

Pre	Mean = 20.07	Standard Deviation = 4.85
Post	Mean = 19.93	Standard Deviation = 4.57

BATTLE MOUNTAIN GRADE 10 SECTION 2

N=15

Number	Pre	Post	D	D^2
801	41	44	-3	9
755	36	31	+5	25
766	46	43	+3	9
786	39	41	-2	4
809	35	36	-1	1
794	43	41	+2	4
756	46	41	+5	25
776	37	33	+4	9
788	35	34	+1	1
764	38	38	0	0
759	34	27	+7	49
757	40	41	-1	1
775	43	39	+4	16
817	45	39	+6	36
793	29	40	-11	121
			$\Sigma D=19$	$\Sigma D^2=310$

$\overline{D} = 1.27$

$\Sigma d^2 = 310 - \frac{19^2}{15} = 285.93$

$S_{\overline{D}} = \sqrt{\frac{285.93}{15\ (14)}} = 1.17$

$T = \frac{1.27}{1.17} = 1.09$

Pre	Mean = 39.13	Standard Deviation = 4.94
Post	Mean = 37.87	Standard Deviation = 4.76

BATTLE MOUNTAIN GRADE 10 SECTION 3

N=15

Number	Pre	Post	D	D^2
801	54	58	-4	16
755	49	48	+1	1
766	50	45	+5	25
786	44	60	-16	256
809	43	51	-8	64
794	29	32	-3	9
756	30	32	-2	4
776	45	38	+7	49
788	43	46	-3	9
764	37	44	-7	49
759	44	45	-1	1
757	34	37	-3	9
775	39	33	+6	36
817	30	39	-9	81
793	44	40	+4	16
			$\Sigma D=-33$	$\Sigma D^2=625$

$\overline{D} = 2.2$

$\Sigma d^2 = 625 - \frac{332}{15} = 552.4$

$S_{\overline{D}} = \sqrt{\frac{552.4}{15\ (14)}} = 1.62$

$T = \frac{2.2}{1.62} = 1.36$

Pre	Mean = 41	Standard Deviation = 7.65
Post	Mean = 43.2	Standard Deviation = 8.65

ROCKY FORD

Summary

	Pre Mean	Pre Standard Deviation	Post Mean	Post Standard Deviation	Total
GRADE 7					
Total	109.07	11.00	104.06	10.02	1.639
Section 1	26.27	5.39	22.53	4.63	2.644
Section 2	42.4	4.34	41.2	4.83	1.616
Section 3	40.4	4.95	40.33	4.19	.039
GRADE 8					
Total	103.43	12.22	105.07	7.65	.440
Section 1	27.8	7.51	24.13	5.01	1.5
Section 2	37.53	7.29	40.2	4.57	1.46
Section 3	37.67	6.13	42.2	5.21	2.128
GRADE 9					
Total	103.87	12.09	103.53	9.90	.114
Section 1	26.2	6.47	21.73	4.01	3.04
Section 2	38.4	6.87	39.53	5.55	1.14
Section 3	39.27	4.56	41.07	5.16	1.62
GRADE 10					
Total	103.27	9.3	102.87	9.05	.054
Section 1	26.67	5.74	21.6	5.72	3.53
Section 2	36.66	4.97	39.93	7.07	1.58
Section 3	39.93	4.70	41.33	4.06	.853

ROCKY FORD

GRADE 7

TOTAL

N=15

Number	Pre	Post	D	D^2
228	111	103	+8	64
268	100	107	-7	49
271	119	102	+17	289
265	118	100	+18	324
195	106	111	-5	25
267	98	103	-5	25
230	103	84	+19	361
255	125	130	-5	25
257	115	109	+6	36
254	117	92	+25	625
397	100	101	-1	1
226	89	101	-12	144
239	95	101	-6	36
202	117	111	+6	36
274	123	106	+17	289
			$\sum D = 75$	$\sum D^2 = 2329$

$\overline{D} = 5$

$\sum d^2 = 2329 - \frac{75^2}{15} = 1954$

$S_{\overline{D}} = \sqrt{\frac{1954}{15\ (14)}} = 3.05$

$T = \frac{5}{3.05} = 1.639$

Pre	Mean = 109.07	Standard Deviation = 11.00
Post	Mean = 104.06	Standard Deviation = 10.02

ROCKY FORD GRADE 7 SECTION 1

N=15

Number	Pre	Post	D	D^2
228	26	16	+10	100
268	24	22	+2	4
271	30	22	+8	64
265	24	19	+5	25
195	24	29	-5	25
267	18	20	-2	4
230	21	17	+4	16
255	30	30	0	0
257	30	21	+9	81
254	32	20	+12	144
397	22	23	-1	1
226	25	21	+4	16
239	19	21	-2	4
202	32	32	0	0
274	37	25	+12	144
			$\sum D = 56$	$\sum D^2 = 628$

$\overline{D} = 3.733$

$\sum d^2 = 628 - \frac{56^2}{15} = 418.93$

$S_{\overline{D}} = \sqrt{\frac{418.93}{15\ (14)}} = 1.412$

$T = \frac{3.733}{1.412} = 2.644$

Pre	Mean = 26.27	Standard Deviation = 5.39
Post	Mean = 22.53	Standard Deviation = 4.63

ROCKY FORD GRADE 7 SECTION 2

N=15

Number	Pre	Post	D	D^2
228	44	44	0	
268	44	42	+2	4
271	44	43	+1	1
265	49	42	+7	49
195	42	43	-1	1
267	41	42	-1	1
230	40	30	+10	100
255	46	48	+1	1
257	49	48	+1	1
254	40	36	+4	16
397	39	36	+3	9
226	31	39	-8	64
239	42	37	+5	25
202	42	44	-2	4
274	43	44	-1	1
			$\sum D = 21$	$\sum D^2 = 187$

$\overline{D} = 1.4$

$\sum d^2 = 187 - \frac{21^2}{15} = 157.6$

$S_{\overline{D}} = \sqrt{\frac{157.6}{15\ (14)}} = .866$

$T = \frac{1.4}{.866} = 1.616$

Pre	Mean = 42.4	Standard Deviation = 4.34
Post	Mean = 41.2	Standard Deviation = 4.83

ROCKY FORD GRADE 7 SECTION 3

N=15

Number	Pre	Post	D	D^2
228	41	43	-2	4
268	32	43	-11	121
271	45	37	+8	64
265	45	39	+6	36
195	40	39	+1	1
267	39	41	-2	4
230	42	37	+5	25
255	49	52	-3	9
257	36	40	-4	16
254	45	36	+9	81
397	39	42	-3	9
226	33	41	-8	64
239	34	43	-9	81
202	43	35	+8	64
274	43	37	+6	36
			$\sum D = 1$	$\sum D^2 = 615$

$\bar{D} = .066$

$\sum d^2 = 615 - \frac{1}{15} = 614.934$

$S_{\bar{D}} = \sqrt{\frac{614.934}{15\ (14)}} = 1.711$

$T = \frac{.066}{1.711} = .039$

Pre	Mean = 40.4	Standard Deviation = 4.95
Post	Mean = 40.33	Standard Deviation = 4.19

ROCKY FORD GRADE 8 TOTAL

N=14

Number	Pre	Post	D	D^2
592	102	122	-20	400
500	105	100	+5	25
508	130	100	+30	900
522	108	106	+2	4
465	82	99	-17	289
473	97	105	-8	64
506	111	94	+17	289
464	112	103	+9	81
595	101	108	-7	49
518	80	98	-18	324
466	105	105	0	0
455	103	102	+1	1
533	104	112	-8	64
569	108	117	-9	81
			$\sum D=-23$	$\sum D^2=2571$

$\overline{D} = 1.643$

$\sum d^2 = 2571 - \frac{23^2}{14} = 2533.21$

$S_{\overline{D}} = \sqrt{\frac{2533.21}{14\ (14-1)}} = 3.73$

$T = \frac{1.643}{3.73} = .440$

Pre	Mean = 103.43	Standard Deviation = 12.22
Post	Mean = 105.07	Standard Deviation = 7.65

ROCKY FORD GRADE 8 SECTION 1

N=15

Number	Pre	Post	D	D^2
592	24	24	+0	0
500	26	22	+4	16
508	41	18	+23	529
522	30	19	+11	121
465	20	25	-5	25
473	24	32	-8	64
506	45	19	+27	279
464	20	23	-3	9
595	27	25	+2	4
518	18	23	-5	25
466	26	20	+6	36
455	23	24	+1	1
533	30	27	+3	9
569	30	24	+6	36
			$\sum D = 58$	$\sum D^2 = 1620$

$\overline{D} = 3.867$

$\sum d^2 = 1620 - \frac{58^2}{15} = 1395.7$

$S_{\overline{D}} = \sqrt{\frac{1395.7}{15\ (15-1)}} = 2.578$

$T = \frac{3.867}{2.578} = 1.5$

Significance .05 = T of 2.145

Pre	Mean = 27.8	Standard Deviation = 7.51
Post	Mean = 24.13	Standard Deviation = 5.01

ROCKY FORD | GRADE 8 | SECTION 2

N=15

Number	Pre	Post	D	D^2
592	43	42	+1	1
500	33	43	-10	100
508	48	38	+10	100
522	39	46	-7	49
465	34	33	+1	1
473	44	37	+7	49
506	28	38	-10	100
464	45	38	+7	49
519	--	46	---	---
595	40	43	-3	9
518	20	34	-14	196
466	41	40	+1	1
455	36	35	+1	1
533	43	46	-3	9
569	36	48	-12	144
463	33	42	-9	81
			$\Sigma D=-40$	$\Sigma D^2=800$

$$\bar{D} = \frac{40}{15} = 2.667$$

$$\Sigma d^2 = 800 - \frac{402}{15} = 693.33$$

$$S_{\bar{D}} = \sqrt{\frac{693.33}{15\,(14)}} = \sqrt{\frac{693.33}{210}} = 1.817$$

$$T = \frac{2.667}{1.817} = 1.46$$

Pre	Mean = 37.53	Standard Deviation = 7.29
Post	Mean = 40.2	Standard Deviation = 4.57

ROCKY FORD | GRADE 8 | SECTION 3

N=15

Number	Pre	Post	D	D^2
592	35	56	-21	441
500	46	35	+11	121
508	41	44	-3	9
522	39	41	-2	4
465	28	41	-13	169
473	29	36	-7	49
506	38	37	+1	1
464	47	42	+5	25
519				
595	34	40	-6	36
518	42	41	+1	1
466	38	45	-7	49
455	44	43	+1	1
533	31	39	-8	64
569	42	45	-3	9
463	31	48	-17	289
			$\sum D=-68$	$\sum D^2=1268$

$$\bar{D} = \frac{68}{15} = 4.533$$

$$\sum d^2 = 1268 - \frac{68^2}{15} = 959.733$$

$$S_{\bar{D}} = \sqrt{\frac{959.733}{15\ (14)}} = 4.57 = 2.13$$

$$T = \frac{4.533}{2.13} = 2.128$$

Pre	Mean = 37.67	Standard Deviation = 6.13
Post	Mean = 42.2	Standard Deviation = 5.21

ROCKY FORD GRADE 9 TOTAL

N=15

Number	Pre	Post	D	D^2
340	105	96	+9	81
295	116	111	+5	25
331	86	111	-25	625
318	111	118	-7	49
302	105	112	-7	49
282	98	108	-10	100
287	86	99	-13	169
278	83	86	-3	9
298	122	108	+14	196
317	114	113	+1	1
283	118	106	+12	144
307	108	98	+10	100
381	97	83	+14	196
313	100	101	-1	1
276	109	103	+6	36
			$\sum D = 5$	$\sum D^2 = 1781$

$\bar{D} = .333$

$\sum d^2 = 1781 - \frac{5^2}{15} = 1779.33$

$S_{\bar{D}} = \sqrt{\frac{1779.33}{15\ (14)}} = 2.91$

$T = \frac{.333}{2.91} = .114$

Pre	Mean = 103.87	Standard Deviation = 12.09
Post	Mean = 103.53	Standard Deviation = 9.90

ROCKY FORD GRADE 9 SECTION 1

N=15

Number	Pre	Post	D	D^2
340	30	19	+11	121
295	28	24	+4	16
331	15	15	0	0
318	31	25	+6	36
302	28	30	-2	4
282	25	21	+4	16
287	16	25	-9	81
278	15	17	-2	4
298	37	27	+10	100
317	28	23	+5	25
283	30	21	+9	81
307	29	20	+9	81
381	22	19	+3	9
313	28	18	+10	100
276	31	22	+9	81
	X_1=393	X_2=326	$\sum D$= 67	$\sum D^2$=755

$\bar{D}$ = 4.47

$\sum d^2 = 755 - \frac{67^2}{15} = 455.73$

$S_{\bar{D}} = \sqrt{\frac{455.73}{15\ (14}} = 1.47$

$T = \frac{4.47}{1.47} = 3.04$

Pre	Mean = 26.2	Standard Deviation = 6.47
Post	Mean = 21.73	Standard Deviation = 4.01

ROCKY FORD GRADE 9 SECTION 2

N=15

Number	Pre	Post	D	D^2
340	39	40	-1	1
295	43	42	+1	1
331	28	34	-6	36
318	43	49	-6	36
302	36	39	-3	9
282	36	38	-2	4
287	38	37	+1	1
278	24	30	-6	36
298	48	49	-1	1
317	46	47	-1	1
283	42	41	+1	1
307	43	40	+3	9
331	44	33	+9	81
313	30	38	-8	64
276	36	36	0	0
	X_1=576	X_2=593	$\sum D$=-19	$\sum D^2$=281

$\bar{D} = 1.27$

$\sum d^2 = 281 - \frac{19^2}{15} = 256.93$

$S_{\bar{D}} = \sqrt{\frac{256.93}{15\ (14)}} = 1.11$

$T = \frac{1.27}{1.11} = 1.14$

Pre	Mean = 38.4	Standard Deviation = 6.87
Post	Mean = 39.53	Standard Deviation = 5.55

ROCKY FORD | GRADE 9 | SECTION 3

N=15

Number	Pre	Post	D	D^2
340	36	37	-1	1
295	45	45	0	0
331	43	44	-1	1
318	37	44	-7	49
302	41	43	-2	4
282	37	49	-12	144
287	32	37	-5	25
278	44	39	+5	25
298	37	32	+5	25
317	40	43	-3	9
283	46	44	+2	4
307	36	38	-2	4
381	31	31	0	0
313	42	45	-3	9
276	42	45	-3	9
	X_1=590	X_2=616	ΣD=-27	ΣD^2=309

$\overline{D} = 1.8$

$\Sigma d^2 = 309 - \frac{27^2}{15} = 260.4$

$S_{\overline{D}} = \sqrt{\frac{260.4}{15\ (14)}} = 1.11$

$T = \frac{1.8}{1.11} = 1.62$

Pre	Mean = 39.27	Standard Deviation = 4.56
Post	Mean = 41.07	Standard Deviation = 5.16

ROCKY FORD

GRADE 10

TOTAL

N=15

Number	Pre	Post	D	D^2
634	107	105	+2	4
630	89	112	-23	529
425	89	96	-7	49
605	108	116	-8	64
612	111	102	+9	81
622	93	83	+10	100
617	106	112	-6	36
603	88	91	-3	9
598	111	107	+4	16
600	112	107	+5	25
377	111	110	+1	1
433	102	106	-4	16
421	100	93	+7	49
418	115	98	+17	289
602	107	105	+2	4
			$\sum D = 2$	$\sum D^2 = 1272$

$\overline{D} = .133$

$\sum d^2 = 1272 - \frac{2^2}{15} = 1271.73$

$S_{\overline{D}} = \sqrt{\frac{1271.73}{15\ (14)}} = 2.46$

$T = \frac{.133}{2.46} = .054$

Pre	Mean = 103.27	Standard Deviation = 9.30
Post	Mean = 102.87	Standard Deviation = 9.05

ROCKY FORD GRADE 10 SECTION 1

N=15

Number	Pre	Post	D	D^2
634	25	23	+2	4
630	28	28	0	0
425	18	16	+2	4
605	34	33	+1	1
612	36	21	+15	225
622	16	16	0	0
617	27	27	0	0
603	25	15	+10	100
598	24	17	+7	49
600	28	22	+6	36
377	28	31	-3	9
433	28	18	+10	100
421	25	18	+7	49
418	36	21	+15	225
602	22	18	+4	16
			$\Sigma D = 76$	$\Sigma D^2 = 818$

$\overline{D} = 5.067$

$\Sigma d^2 = 818 - \frac{76^2}{15} = 432.933$

$S_{\overline{D}} = \sqrt{\frac{432.933}{15\ (14)}} = 1.436$

$T = \frac{5.067}{1.436} = 3.53$

Pre	Mean = 26.67	Standard Deviation = 5.74
Post	Mean = 21.6	Standard Deviation = 5.72

ROCKY FORD GRADE 10 SECTION 2

N=15

Number	Pre	Post	D	D^2
634	37	43	-6	36
630	32	42	-10	100
425	31	32	-1	1
605	35	45	-10	100
612	40	41	-1	1
622	33	23	+10	100
617	39	42	-3	9
603	24	28	-4	16
598	44	45	-1	1
600	38	44	-6	36
377	41	39	+2	4
433	39	44	-5	25
421	38	41	-3	9
418	40	40	0	0
602	39	50	-11	121
			$\Sigma D=-49$	$\Sigma D^2=1053$

$\overline{D} = 3.267$

$\Sigma d^2 = 1053 - \frac{49^2}{15} = 892.93$

$S_{\overline{D}} = \sqrt{\frac{892.93}{15\ (14)}} = 2.062$

$T = \frac{3.267}{2.062} = 1.58$

Pre	Mean = 36.66	Standard Deviation = 4.97
Post	Mean = 39.93	Standard Deviation = 7.07

ROCKY FORD GRADE 10 SECTION 3

N=15

Number	Pre	Post	D	D^2
634	45	39	+6	36
630	29	42	-13	169
425	40	48	-8	64
605	39	38	+1	1
612	35	40	-5	25
622	44	44	0	0
617	40	43	-3	9
603	39	48	-9	81
598	43	45	-2	4
600	46	41	+5	25
377	42	40	+2	4
433	35	44	-9	81
421	37	34	+3	9
418	39	37	+2	4
602	46	37	+9	81
			$\sum D=-21$	$\sum D^2=593$

$\overline{D} = 1.4$

$\sum d^2 = 593 - \frac{21^2}{15} = 563.6$

$S_{\overline{D}} = \sqrt{\frac{563.6}{15\ (14)}} = 1.64$

$T = \frac{1.4}{1.64} = .853$

Pre	Mean = 39.93	Standard Deviation = 4.70
Post	Mean = 41.33	Standard Deviation = 4.06

APPENDIX F

SCORING OF ORAL INTERVIEW EVALUATION

OF LIFE SKILLS AND CAREER DEVELOPMENT AREAS

EXPERIENCE BASED CAREER EDUCATION

Colorado Pilot Project
1978-79

Oral interview evaluation of Life Skills and Career Development Areas

PILOT TEST - Windsor, Colorado 90 TOTAL POINTS POSSIBLE
December 13, 1978

NAME	GRADE	AGE	SCORE	EVALUATOR
	7	12	39	Ebrite
	7	12	32	Ebrite
	7	12	39	Ebrite
	7	12	38	Ebrite
	8	14	36	Thoman
	8	13	43	Thoman
	8	13	55	Thoman
	8	14	49	Thoman
	8	13	30	Thoman
	9	14	40	Ebrite
	9	14	69	Thoman
	10	15	61	Ebrite
	10	16	69	Ebrite
	10	15	41	Thoman
	10	15	54	Thoman
	10	15	61	Thoman
	10	15	58	Thoman
	10	16	44	Ebrite

INTERVIEW EVALUATIONS: Holyoke, Colorado — 82 TOTAL POINTS POSSIBLE
April 20, 1979

NAME	GRADE	AGE	SCORE	EVALUATOR
	6	11	47	Ebrite
	6	12	51	Ebrite
	6	11	63	Thoman
	6	12	47	Thoman
	6	11	52	Thoman
	7	13	25	Ebrite
	7	12	37	Ebrite
	7	12	38	Ebrite
	7	14	46	Ebrite
	7	13	37	Ebrite
	8	14	66	Thoman
	8	14	61	Thoman
	8	14	69	Thoman
	8	14	66	Thoman
	8	13	48	Thoman
	9	15	57	Thoman
	9	14	37	Thoman
	9	15	47	Thoman
	9	15	54	Thoman
	9	16	39	Thoman
	10	16	50	Ebrite
	10	16	58	Ebrite
	10	16	28	Ebrite
	10	15	69	Ebrite
	10	16	41	Ebrite

INTERVIEW EVALUATIONS: Rocky Ford, Colorado 82 TOTAL POINTS POSSIBLE
April 24, 1979

NAME	GRADE	AGE	SCORE	EVALUATOR
	7	12	57	Thoman
	7	13	62	Thoman
	6	14	49	Thoman
	7	12	58	Thoman
	7	12	52	Thoman
	8	13	47	Ebrite
	8	14	42	Ebrite
	8	14	47	Ebrite
	8	14	45	Ebrite
	8	14	44	Ebrite
	9	14	34	Thoman
	9	15	57	Thoman
	9	14	49	Thoman
	9	16	49	Thoman
	9	15	34	Thoman
	10	15	54	Ebrite
	10	16	41	Ebrite
	10	16	56	Ebrite
	10	15	39	Ebrite
	10	16	51	Ebrite

INTERVIEW EVALUATIONS: Eagle County School District 82 TOTAL POINTS POSSIBLE
Colorado
April 27, 1979

NAME	GRADE	AGE	SCORE	EVALUATOR
	7	12	58	Ebrite
	7	13	48	Ebrite
	7	14	51	Thoman
	7	12	51	Thoman
	7	13	64	Thoman
	8	14	50	Thoman
	8	14	44	Thoman
	8	14	50	Ebrite
	8	13	46	Ebrite
	8	14	59	Thoman
	9	15	52	Thoman
	9	14	49	Ebrite
	9	15	69	Ebrite
	9	14	63	Thoman
	10	15	77	Ebrite
	10	15	67	Ebrite
	10	16	52	Thoman
	10	17	68	Thoman
	10	16	60	Ebrite
	10	--	71	Ebrite

INTERVIEW EVALUATIONS: Jefferson County Schools 82 TOTAL POSSIBLE POINTS
Colorado
January 16, 1979

NAME	GRADE	AGE	SCORE	EVALUATOR	SCHOOL
	8	13	55	Thoman	Wheatridge JHS
	9	15	59	Thoman	Wheatridge JHS
	9	15	58	Thoman	
	9	14	61	Thoman	
	9	14	47	Thoman	
	9	14	32	Thoman	
	9	14	52	Thoman	
	9	15	52	Thoman	
	9	14	67	Thoman	
	9	15	62	Thoman	
	9	15	39	Ebrite	Alameda JHS
	9	14	62	Ebrite	
	9	15	39	Ebrite	
	9	14	51	Thoman	
	9	15	31	Ebrite	
	9	14	38	Thoman	
	9	15	46	Thoman	
	9	15	29	Ebrite	
	9	15	50	Ebrite	
	9	14	33	Ebrite	

Jefferson County Schools
Colorado
May 4, 1979

7	13	67	Ebrite	Alameda JHS
7	12	54	Ebrite	Alameda JHS
8	14	53	Thoman	Wheatridge JHS
8	14	70	Thoman	Wheatridge JHS
8	13	62	Thoman	Wheatridge JHS
9	15	59	Ebrite	Alameda JHS
9	15	62	Ebrite	Alameda JHS
9	15	49	Thoman	Wheatridge JHS
9	15	56	Thoman	Wheatridge JHS
9	15	74	Ebrite	Alameda JHS
9	15	57	Thoman	Wheatridge JHS
9	14	53	Ebrite	Alameda JHS
9	14	63	Ebrite	Alameda JHS

SECOND SEMESTER

WHEATRIDGE

1. 9th
2. 9th
3.
4.

1. 8th
2.
3.
4.

ALAMEDA

1. 9th
2. 9th
3. 9th
4. 9th
5. 9th
6. 9th
7. 9th
8. 9th

JEFFERSON COUNTY - Alameda Junior High

1.	(9)	62/83	75%	LE
2.	(9)	46/83	55%	MT
3.	(9)			
4.	(9)	51/83	61%	MT
5.	(9)			
6.	(9)	39/83	47%	LE
7.	(9)			
8.	(9)	50/83	60%	LE
9.	(9)	31/83	37%	LE
10.	(9)	33/83	40%	LE
11.	(9)			
12.	(9)	38/83	46%	MT
13.	(9)	39/83	47%	LE
14.	(9)	29/83	35%	LE
15.	(9)			

JEFFERSON COUNTY - Wheatridge

1.	(ECC)	67/83	81%	MT
2.	(9)	61/83	73%	MT
3	(8)	55/83	66%	MT
4.	(9)	67/83	81%	MT
5.	(9)	52/83	63%	MT
6.	(9)	63/83	76%	MT
7.	(9)			
8.	(9)			
9.	(9)	52/83	63%	MT
10.	(9)	47/83	57%	MT
11.	(9)	60/83	75%	MT
12.	(8)			
13.	(9)			
14.	(9)	32/83	39%	MT
15.	(9)			

59% average score

Students from Windsor Public Schools involved in Career Education Project Interview Evaluation Instrument Field Test on December 13, 1978, Wednesday.

Evaluators: Mary Thoman, Lou Ebrite

Windsor Middle School (Arlen Koehler, Principal):

7th Grade	Score	Evaluator	8th Grade	Score	Evaluator
	(39/90)	/LE/ 43%		(36/90)	/MT/ 40%
	(32/90)	/LE/ 36%		(43/90)	/MT/ 48%
	(39/90)	/LE/ 43%		(55/90)	/MT/ 59%
	(38/90)	/LE/ 42%		(49/90)	/MT/ 54%
				(30/90)	/MT/ 33%

Windsor High School (Gary Harsin, Principal):

9th Grade	Score	Evaluator	10th Grade	Score	Evaluator
	(40/90)	/LE/ 44%		(61/90)	/LE/ 68%
	(69/90)	/MT/ 77%		(69/90)	/LE/ 77%
				(44/90)	/LE/ 49%
				(41/90)	/MT/ 46%
				(54/90)	/MT/ 60%
				(61/90)	/MT/ 68%
				(58/90)	/MT/ 64%

53% average score

APPENDIX G

STAFF OPINION SURVEY

C E B C E

7 - 10

STAFF OPINION SURVEY

Dear Colleague:

We are very interested in your opinions regarding the experience-based program. Based on your involvement with EBCE this year, we are asking that you complete this survey. For your convenience and confidentiality, we have self-addressed and stamped the back page of this survey so you can simply fold it in half, staple the end and mail it to the state office.

Each questionnaire is coded with a district code number. Please don't feel we have coded surveys with your name. Comments by individuals will be kept confidential, in that, only a composite district report will be distributed or used for evaluation purposes.

Many of the questions on this survey correspond with the student pre/post test. In order to have a total picture of how EBCE is progressing, your response is very important. Please take the time (15 to 25 minutes) to complete and mail this survey by May 15.

Thank you.

COLORADO EXPERIENCE BASED CAREER EXPLORATION
7 - 10
STAFF OPINION SURVEY

Name: (optional) _____

Type of Program (check appropriate spaces)

_____junior high _____infused

_____senior high _____alternative

_____mini-class

Subject Area/Areas_____ Adm. Responsibilities_____

1. Listed below are major learning activities. Rate each activity, first in terms of how important you feel it is for students, and secondly in terms of how effective you feel it has been this year. Some activities may be considered important, but have not produced effective results while others may be considered very effective but have been of little importance. If the activity is not used in your program, circle N/A for not applicable.

	Learning Activities	How Important Not Impt. Highly Impt.	How Effective Not Effec. Highly Effec.
a.	Student orientation	1 2 3 4 5	1 2 3 4 5 NA
b.	Student accountability system	1 2 3 4 5	1 2 3 4 5 NA
c.	Guidance activities	1 2 3 4 5	1 2 3 4 5 NA
d.	Mini-units (Projects)	1 2 3 4 5	1 2 3 4 5 NA
e.	Pre-written projects	1 2 3 4 5	1 2 3 4 5 NA
f.	Competencies (survival skills)	1 2 3 4 5	1 2 3 4 5 NA
g.	Career explorations (group)	1 2 3 4 5	1 2 3 4 5 NA
h.	Individual career explorations	1 2 3 4 5	1 2 3 4 5 NA
i.	Community seminar/career speakers	1 2 3 4 5	1 2 3 4 5 NA
j.	Student journals	1 2 3 4 5	1 2 3 4 5 NA
k.	Individually negotiated projects	1 2 3 4 5	1 2 3 4 5 NA
l.	Media reviews	1 2 3 4 5	1 2 3 4 5 NA
m.	Community internships/Learning and Skill Building Levels	1 2 3 4 5	1 2 3 4 5 NA
n.	Negotiating	1 2 3 4 5	1 2 3 4 5 NA
o.	Others:	1 2 3 4 5	1 2 3 4 5 NA

2. On the grid below, indicate how helpful you feel the EBCE program/experiences have been in helping students to do each of the following: Circle the number which corresponds with your feelings.

		Of Little or No Help				Very Helpful
a.	Solve problems logically.	1	2	3	4	5
b.	Understand more about themselves.	1	2	3	4	5
c.	Get along with others and work cooperatively.	1	2	3	4	5
d.	Understand the democratic process. (Functional Citizenship)	1	2	3	4	5
e.	Learn how their interests and abilities fit into potential careers (career planning)	1	2	3	4	5
f.	Learn how society's values affect the world of work.	1	2	3	4	5
g.	Improve their reading skills.	1	2	3	4	5
h.	Improve their math skills.	1	2	3	4	5
i.	Improve their oral communication skills.	1	2	3	4	5
j.	Improve their written communication skills.	1	2	3	4	5
k.	Know what level of basic skills proficiency is required in the jobs of interest to them.	1	2	3	4	5
l.	Gain confidence in their ability to apply basic skills to complete tasks and to solve problems around them.	1	2	3	4	5
m.	Become acquainted with a broad range of resources to use in gathering information.	1	2	3	4	5
n.	Communicate comfortably with adults.	1	2	3	4	5
o.	Take responsibility for their own learning and actions.	1	2	3	4	5
p.	Become more open to ideas and values different from their own.	1	2	3	4	5
q.	Use information obtained through direct experiences in making decisions.	1	2	3	4	5
r.	Feel prepared to accept responsibilities.	1	2	3	4	5
s.	Applied problem solving and decision making skills to problems in a career field.	1	2	3	4	5

3. What factors, in your opinion, have been primarily responsible for the success of the EBCE program?

4. In your opinion, what obstacles, limited the success of the EBCE program?

5. In what areas have your students made the greatest growth?

6. In what areas have your students made the least growth?

7. What effects do you feel EBCE has had on the total school?

8. What effects do you feel EBCE has had on the community?

9. What effect has working with EBCE had on your personal/professional growth as a teacher?

10. What additional services would you like to see provided by (1) career education staff or (2) building administration to enhance effectiveness of EBCE?

11. Other Comments:

Jannice J. Cromwell, Director CEBCEM
State Board for Community Colleges
and Occupational Education
1525 Sherman Street, Room 207
Denver, CO 80203

APPENDIX H

COMMENTS ON STAFF OPINION SURVEY

STAFF OPINION SURVEY

Jefferson County

3. What factors, in your opinion, have been primarily responsible for the success of the ECC program this year?

   Good materials, we know what we're doing - organized, good sites.

4. In your opinion, what obstacles, if any, limited the success of the ECC program this year?

   Credit issue with L.A. and S.S.

5. In what areas have your ECC students made the greatest growth this year? Briefly describe and state why.

   Becoming more responsible, mature, self-confident, resourceful - they had opportunity to take responsibility for themselves.

6. In what areas have your ECC students made the least growth this year? Briefly describe and state why.

   Basic skills - we didn't stress them.

7. What effects, if any, do you feel the ECC program has had on the regular school program? Why?

   Kids more motivated.

8. What effects, if any, do you feel the ECC program has had on the community? Why?

   Good community school relationships.

9. What changes would you suggest in the ECC program for next year?

   None

10. What effect has working in the ECC program had on your personal/professional growth as a teacher?

    I've learned counseling skills and to be more flexible.

11. What additional services would you like to see provided by (1) career education staff (2) building administration to enhance ECC program effectiveness?

    Assure credit in L.A. and S.S. expand facilities.

12. Other Comments:

    It is a fantastic program!

STAFF OPINION SURVEY

ROCK' FORD

3. What factors, in your opinion, have been primarily responsible for the success of the EBCE program?

Individual effort put in by our director and coordinator.

Teacher input and community involvement.

The care of businessmen and occupational people to open their doors, take time away from busy hours to show us about and tolerate students.

District Coordinator and Building Coordinator.

4. In your opinion, what obstacles, limited the success of the EBCE program?

Those teachers who dragged their feet.

Students disinterest.

The only obstacle would be the resource people listed who in one area and interest, were top fully occupied and need of more resources.

5. In what areas have your students made the greatest growth?

Awareness of career opportunities and the qualities necessary for success (including education supplementation).

More awareness.

Awareness towards the varied community careers and potentials for future as well as the plant functioning.

6. In what areas have your students made the least growth?

Getting along with one another and making logical decisions.

Personal awareness of their own values.

None that I can think of -

7. What effects do you feel EBCE has had on the total school?

A realization of the community as a whole and the important role of education in the success of that community.

A greater tie between schools and community that breaks down the gap people can feel toward each other.

8. What effects do you feel EBCE has had on the community?

Better communications between the schools and the community. A feeling of family including community people in the school program.

Made them more aware of what schools are doing.

An awareness of student curiosity, interest and comprehension.

Positive.

9. What effect has working with EBCE had on your personal/professional growth as a teacher?

I've learned a lot about this community and the willingness of the people to share their expertise.

Got to know some kids better.

Definitely an intent to keep a log of activities involved and to build on this yearly for the future classes by coordinating science (ecology) to careers.

Positive - Motivative

10. What additional services would you like to see provided by (1) career education staff or (2) building administration to enhance effectiveness of EBCE?

More push to emphasize career education in classroom.

Inservice.

Personally, for our district, this department needs to be retained and added upon rather than cut, as I understand much benefit of community-school relations for the benefit of children whose futures lie in opening their eyes on these varied field trips as well as the barrier community members can have toward that distant thing called school. Students definitely seemed more thrilled at seeing their community and its functions than I've ever seen in distant out of town trips.

11. Other comments: (None made)

STAFF OPINION SURVEY

EAGLE

3. What factors, in your opinion, have been primarily responsible for the success of the EBCE program?

The director.

Counseling Program - Sincere desire on part of teachers.

Resource information.

The deligence of the building coordinator and his willingness to donate personal time and effort.

Lots of inservice help, good communications with the Denver staff.

Facilitators, student interest, teacher participation.

Teacher concern and interest.

Hard work of the resource people and availability of outside help.

The person in charge.

4. In your opinion, what obstacles, limited the success of the EBCE program?

Time.

Money-school budget.

Forced teacher workshops, required participation in EBCE.

Time for planning responsibilities for other classes because of Jr./Sr. High situation limited my ability to become involved.

Monies and time.

Teachers just [illegible]e too much to do. No time to preview materials, re-write a curriculum.

Understanding of the program.

Possibly our geographic location.

5. In what areas have your students made the greatest growth?

Personal awareness.

Knowing themselves.

Value clarification.

Recognition of possible employment choices and requirements.

Trip

Independent thinking - working with people in the community.

Knowledge of different types of vocations and what is necessary for them.

Gathering career information to make further decisions.

Career choice and decision making.

6. In what areas have your students made the least growth?

Career choices.

Individual responsibility for making decision and commitments and openess to the values held by others.

Actually learning - realizing how important school is, basic skills help get jobs.

Identifying needs, skills, etc.

Job explorations

Academics

7. What effects do you feel EBCE has had on the total school?

Good

Average - it will grow.

Disoriented teachers - negative efforts because of the constant emphasis on implementation on career education ideas in the classroom.

For those directly involved in a career oriented class, the effects were positive. As a whole, I feel there was little effect.

It has helped in areas where teachers were helped to begin Career Education.

Integration of career ideas into the regular curriculum.

Broader horizon.

Very little.

It has helped.

Not much.

8. What effects do you feel EBCE has had on the community?

Good.

Average - we are getting more community people involved.

None.

No information.

It has involved many people in the schools.

Involved the community in the education of students - not just involvement in extracurricular activities.

More community involvement - people now more interested in kids and schools.

None.

It has made the community more aware of the goals of the school.

None.

9. What effect has working with EBCE had on your personal/professional growth as a teacher?

Great - I have had a lot of knowledgeable people come to help.

Opened up some alternative educational ideas.

Awareness of needs for student information, values assessment and (didn't finish)

The coordinator has helped me find new resource people.

Made me feel like the material I teach is more relevant to the students. Met lots of nice people in classes, inservice, etc.

Broadened my outlook on helping students look at jobs, helping the, identify their skills and relate to a job.

Very little, because of administrative support (lack).

I have become more aware of different areas and different methods of teaching.

None.

10. What additional services would you like to see provided by (1) career education staff or (2) building administration to enhance effectiveness of EBCE?

Resource person continue.

Released time for building coordinators to help each teacher in planning career activities for each subject area, make phone calls, correspondence etc., this would facilitate integration by classroom people.

The coordinator in the building be given one period just to work on Career Education related items.

Keep the money and district level coordination in the local districts.

Keep the program - heopfully district will fund.

Long term goals and understanding of "Career Ed" vs. "Vocational Ed."

More district funds available to provide for the continuation of the career education program.

11. Other comments:

I did not use the EBCE program this year.

I have used C.E. in most classes. There is too much money being spent in our district for travel and coordinators and not much available for in the classroom.

Like most State/Federal projects the effect is short term and last only as long as the money.

Our building coordinator, Donna Zimmerman, has done an excellent job of informing us of programs available and helping us obtain materials.

STAFF OPINION SURVEY

HOLYOKE

3. What factors, in your opinion, have been primarily responsible for the success of the EBCE program?

   Coordinator willingness of staff and administration.

   We have had a good Director who was willing to help us whenever we needed help.

   The success only shows where teachers use it and then is only as successful as the teacher's efforts - (Generally I feel that the teachers did the work and someone else drew the money.)

   Faculty-student involvement.

4. In your opinion, what obstacles, limited the success of the EBCE program?

   Not allowing for internships and individual career exploration.

   In my area it was the paper work.

   Instead of being a part of a specific class it was to be used where applicable which means never because of time involved in finding materials located in other rooms, etc.

5. In what areas have your students made the greatest growth?

   Awareness of occupation.

   Making blueprints and bill of materials.

   Decision making and basic competencies.

6. In what areas have your students made the least growth?

   Follow up of individual projects.

   Positive attitude toward pre and post tests.

   The desire to achieve excellence seems to be lacking so often. It becomes increasingly difficult to really motivate students.

   Basic skills.

7. What effects do you feel EBCE has had on the total school?

   Good - more aware of total community contribution (resource) and education.

   Provided resource materials and helped with field trips and etc.

   Cutting down on interest in vocational subjects where this type of material should be in the first place.

   Increased awareness of the total career program and the world of work.

8. What effects do you feel EBCE has had on the community?

   Public Relations - provided awareness of career education.

   I don't know.

I doubt if the community has been affected in any great way - because of previous continuing programs.

Increased community-school communication and involvement.

9. What effect has working with EBCE had on your personal/professional growth as a teacher?

Provided insight into community resources available to education.

Became aware of new resources and ways of evaluating students progress.

Has provided some materials for use in instruction.

I've become more aware of the necessity of providing career information and a good role model to students.

10. What additional services would you like to see provided by (1) career education staff or (2) building administration to enhance effectiveness of EBCE?

Provide integration into total curriculum.

Increased emphasis upon basic skills.

11. Other comments:

A worthwhile project for our district.

I think it leads to lots of people doing the same type of job that others are doing in other areas-more jobs-but not necessarily more accomplished.

Too much emphasis upon the "vocational" not enough on the "academic" or "professional" careers.

APPENDIX I

PARENT OPINION SURVEY

COLORADO EXPERIENCE-BASED CAREER EXPLORATION
PARENT OPINION SURVEY

1. How well do you feel the Career Education Program compares overall with the past school experiences of your daughter or son?

Much Worse				Much Better
1	2	3	4	5

2. How well do you think your son or daughter likes the Career Education Program compared with past school experiences?

Much Worse				Much Better
1	2	3	4	5

3. In comparison with past years how much opportunity has your daughter or son had for learning about careers?

Much Less		About the Same		Much More
1	2	3	4	5

4. What effect has Career Education had on helping your son or daughter form career plans?

Definitely Negative		No Effect		Definitely Positive
1	2	3	4	5

5. In comparison with previous years how much opportunity did the Career Education Program provide for your son or daughter in practical living skills. (e.g., How to balance a checkbook) in addition to basic skills.

Much Less		No Effect		Much More
1	2	3	4	5

6. In comparison with past years how motivated is your daughter or son to learn?

Much Less		No Effect		Much More
1	2	3	4	5

7. Before the start of the Career Education Program, how often did your son or daughter talk to you about what was going on in their classes?

Almost Never				Almost Daily
1	2	3	4	5

8. How often does your son or daughter talk to you about what's going on in their classes now?

Almost Never				Almost Daily
1	2	3	4	5

9. What do you think are the greatest weaknesses of the Career Education Program? (Check any of the following which are applicable.)

_____ a. Some students can't handle the freedom
_____ b. Problems in the organization/staffing of the program
_____ c. Students not receiving sufficient training in basic skills or practical living skills
_____ d. Inadequate supervision of students on job sites
_____ e. Lack of a variety of job sites to meet students' interests
_____ f. Too difficult for or too much work required for some students
_____ g. Students did not have enough time on community sites
_____ h. No opportunity to continue program from junior to senior high
_____ i. Inadequate transportation to sites
_____ j. Other: _____

10. What do you think are the greatest strengths of the Career Education Program? (Check any of the following which are applicable.)

_____ a. Quality of the staff
_____ b. Students learn about a variety of careers
_____ c. Students learn about "real life" situations and responsibilities
_____ d. Good way of motivating students to learn
_____ e. Experience in working with adults in their community
_____ f. Students receive individual attention and have the opportunity to become involved in their own learning
_____ g. Students have the opportunity to acquire a sense of independence and responsibility
_____ h. Good way to apply school learned skills "to real life situations"
_____ i. Program provides guidance in career planning
_____ j. Other: _____

11. What changes have you noticed in your son or daughter that you feel are a result of participation in the Career Education Program? (Check one or more of the following.)

_____ a. Greater maturity or self direction
_____ b. Better able to relate to others
_____ c. Greater self confidence
_____ d. Clearer direction about his/her future
_____ e. More interested in education
_____ f. Better understanding of jobs
_____ g. Improvement in basic skills
_____ h. More realistic attitudes towards life, work, etc.
_____ i. None
_____ j. Other (Please write in) _____

_____

12. What negative changes, if any, have you noticed in your son or daughter that you feel are a result of participation in Career Education? (Check one or more of the following.)

_____ a. None
_____ b. Less interested in education
_____ c. Less interested in working
_____ d. More critical of others
_____ e. Disappointed with the program
_____ f. Unable to cope with change
_____ g. Other (Please write in) _____

_____

13. What types of knowledge, skills or attitudes has your son or daughter acquired in this Program that you feel he or she would not have gotten from a regular school program? (Check one or more of the following.)

_____ a. First-hand knowledge of one or more businesses/occupations
_____ b. First-hand knowledge of demands in a "real world"
_____ c. A chance to try out some job related tasks
_____ d. Working with other people
_____ e. On-the-job skills
_____ f. Self-discipline and responsibility
_____ g. Motivation to learn
_____ h. Opportunity to apply problem solving and decision making skills
_____ i. Nothing
_____ j. Other (Please write in) _____

_____

14. Please give any additional comments or recommendations you may have for Career Education in our district.

_____

_____

_____

_____

_____

APPENDIX J

COMMENTS ON PARENT OPINION SURVEY

PARENT OPINION SURVEY

JEFFCO

14. What do you think are the greatest weaknesses of the ECC Program? (Check any of the following which are applicable.)

Other:

I feel that much more emphasis should be toward the trades rather than the professions.

Students were using time away from school for goofing off.

Some groups had better tours than others, at the same sites, but at different days or times.

Definately positive experiences as per our son.

When school bus was used, driver frequently became lost.

I have no knowledge of the "curriculum" of this course other than the students rode buses to different businesses which they visited.

Students questions weren't answered on the job site.

15. What do you think are the greatest strengths of the ECC Program? (Check any of the following which are applicable)

Other:

Teaches responsibility for self.

16. What position changes, if any, have you noticed in your son or daughter that you feel are a result of participation in the ECC Program? (Check one or more of the following.)

Other:

Has had the opportunity to give thought to what type of career she would like to work toward.

Many times she had to go against the others in her group that were not doing right and stand on her own.

One of the first school experiences our son has been genuinely interested in.

Appreciation of others job.

My son has a part-time job which has helped him relate to material being presented in this program.

17. What negative changes, if any, have you noticed in your son or daughter that you feel are a result of participation in the ECC Program? (Check one or more of the following.)

Other:

None.

None.

None.

None.

He remarked that some of the job sites visited did not seem to offer career type direction.

18. What types of knowledge, skills or attitudes has your son or daughter acquired in the ECC Program that you feel he or she would not have gotten from a regular schooi program? (Check one or more of the floolowing.)

Other:

(NO COMMENTS MADE ON #18)

19.½. Other comments: JEFFCO

More emphasis on basic business math. Less dependence on business machines such as calculators, etc. More envolvement, that not every job is a snap 9 - 5, Monday-Friday.

Possibly screening the students more carefully and those that proved uninterested in the welfare of their group or activities not be allowed to go without an adult.

None.

During the Open House in the fall, scheduling of visiting classes does not allow the parents of students enrolled during the 2nd semester of ECC to learn about the program. We would suggest that parents of 2nd semester ECC students be informed of the program's goals, philosophy, logistics to handle students, etc. at the beginning of the spring semester.

We feel that the teachers and administrators contributed greatly to make the ECC program a worthwhile, meaningful experience for our son. We are most appreciative of their efforts, interest and hard work.

Students might benefit from planning and arranging job sites and related activities.

Not allow smoking at site. Better bus drivers - one driver took the kids to McDonalds because he couldn't find site. Overall, I was more pleased this year than my daughters experience last year since her program was supposed to be geared to the gifted more a matter of expectations. I feel Jim enjoyed the program and found it stimulating.

Adult supervision to the downtown Denver sites.

Let students pick more of the job sites that they are sent to.

Possibly a chance to participate further in one of the fields a student finds more interesting, i.e. part-time summer jobs, etc.

Our compliments to those responsible for carrying out the program by creating interest, which we feel is the greatest motivator a student can have.

I feel "on the job day" needs a letter of introduction for students to present to businesses to visit. Some of the places had no idea what my son was talking about and therefore said "no" to him as they didn't understand the program.

More staff and parent contact as to how they feel student is doing.

Very, bery good program!

14. Other comments: HOLYOKE

I feel this program is great for the student that doesn't plan to or is unable to continue their education in college. Else I feel Holyoke is too small to offer proper situations. Too many students in high school use it for a easy course.

9. What do you think are the greatest weaknesses of the Career Education Program?

Other:

Not individualized enough to find needs and desires of each student to develop his own interests as far as careers and goals.

Not enough exposure to different types of occupations.

Not gone to any job sites

14. Other comments:

EAGLE

Basic forms such as resumes and over letters should be introduced with the aim of enabling each student to eventually be able to complete all these forms. Individual counseling with each student to make him or her aware of careers she is suited for and the necessary qualifications to be successful in this role. It dhould be made a freshman requirement with the goal of enlightening the student in terms of opportunities so they might begin to plan their high school education to help meet their goals.

The career school planning program is good because it helps students find more jobs they are looking for.

14. Other comments: ROCKY FORD

Its just a shame that all the school administrators (principal and superintendent) thinks about is sports and not of a very helpful program as career education for all students instead of just narrowminded or playful type parents and children. We need education for our children, and not just those that have money or hi class or color.

APPENDIX K

COMMUNITY SURVEY

COLORADO EXPERIENCE-BASED CAREER EXPLORATION
COMMUNITY SURVEY

Your Name_____

Title_____

Name of Company/Organization_____

1. Which of the following services do you (or others at your site) provide for the students and how important do you feel that is for students?

	Did This At My Site	Very Important	Somewhat Important	Not Important
Give general information about your company, such as history, products or services provided and economic or social trends that affect your organization.				
Give information about maintaining your organization including organizational structure, financial information and personnel practices.				
Give tours and brief explanation of the whole organization.				
Give information about job opportunities in your organization.				
Allow students to get detailed information about one or more departments in your organization, including such items as organization, types of jobs, special equipment and tools, worker tasks and types of skills needed by workers.				
Allow students to spend time with individual workers to find out more about their jobs and their lifestyles.				
Allow students to try out some simple job related tasks.				
Evaluate individual student's assignments and/or projects.				
Help design and/or plan activities for student projects.				
Other:				

2. What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom: (Check one or more reasons.)

_____ a. First-hand knowledge of demands in a "real world"
_____ b. Knowledge of how basic skills are used in real life
_____ c. Working with other people
_____ d. Knowledge of how the free enterprise system works
_____ e. On-the-job skills
_____ f. Information about how your company/organization is organized and managed
_____ g. Self-discipline and responsibility
_____ h. Information about jobs and lifestyles of workers
_____ i. Motivation to learn
_____ j. General information about your company/organization
_____ k. Process of solving problems specific to a career field
_____ l. Other (please write in)_____

_____

3. Do you think the students you have worked with have benefited by being at your site? (Circle the appropriate number.)

Definitely NO — Definitely YES

1 2 3 4 5

4. Rate the following for the students you have worked with.

	Most Students 1	2	3	4	No Students 5
a. Students were interested in learning about your business or organization.					
b. Students were prepared to ask questions during their visits.					
c. Students behaved appropriately during their visits.					
d. Students understood why they were visiting places of employment.					
e. Students followed the format for career explorations designed by the school. (Community experience)					
f. Students were able to solve problems and complete tasks related to the career field explored.					

5. How did you first become involved with the program? (Check appropriate response.)

_____ a. Program personnel contacted me about the program
_____ b. A student talked to me about the program
_____ c. Another employer talked to me about the program
_____ d. Company personnel talked to me about the program
_____ e. Other (Please write in)_____

6. How would you rate the following based on your interaction with the school system?

	Always 1	2	3	4	Never 5
a. School representatives informed you in advance when students would be visiting your site.					
b. School representatives provided you with adequate feedback about what happens to students when they leave your site.					
c. School representatives were available to assist you when problems occurred.					

7. In what ways (if any) have the employees at your site benefited? (Check one or more appropriate response(s).

_____ a. Increased their awareness and understanding of youth
_____ b. Motivated the regular employees to further training
_____ c. Reduced their work load
_____ d. Increased interest and understanding of their own job and work
_____ e. Felt involved in the educational process
_____ f. Other (Please write in)_____

8. Would you recommend to another employer or colleague that he/she also become involved with the program?

_____ Yes _____ No

9. What do you think are the greatest strengths of the program? (Check one or more reasons.)

_____ a. Students learn about a variety of careers
_____ b. Students learn about real life situations
_____ c. Good way of getting students to learn
_____ d. Students get experience in working with adults
_____ e. Other (Please write in)_____

10. What do you think are the greatest weaknesses of the program? (Check one or more reasons.)

_____ a. Problems in the organization of the program
_____ b. Students not receiving sufficient preparation for site visit
_____ c. Inadequate supervision of students on your site
_____ d. Too much paperwork
_____ e. Lack of feedback about students
_____ f. May be too difficult/technical for some students
_____ g. Other (Please write in)_____

11. What other comments or recommendations would you like to make?

_____

_____

APPENDIX L

COMMENTS ON COMMUNITY OPINION SURVEY

COMMUNITY SURVEY

JEFFCO

2. Which of the following services do you (or others at your site) provide for the students?

Other:

NO COMMENTS

3. What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom:

Other:

NO COMMENTS

4. In general, do you think the ECC students you have worked with have benefited by being at your site?

NO COMMENTS

5. How would you rate the following for the ECC students you have worked with in this program?

NO COMMENTS

6. How did you first become involved with the program?

Other:

NO COMMENTS

7. How would you rate the following based on your interaction with the school system?

NO COMMENTS

8. How have employees at your site reacted to your agency's participation in ECC?

NO COMMENTS

9. In what ways (if any) have the employees at your site benefited?

Other:

10. Do you plan to continue participating in the ECC program the rest of this year and/or next year?

Other:

Time allotted should be minimized.

11. Would you recommend to another exployer or colleague that he/she also become involved with the program?

Other:

The more views the better I think.

More participation, more opportunities to the students.

Depends upon the job. In theory, the program is good.

11. continued

It is worthwhile if you can get through to even 15 or 20% of the students. Those students who are moderately interested in geology before they come seem to be very enthusiastic when they finish.

Assist youths in exploring full range of career possibilities.

12. What do you think are the greatest strengths of the program?

Other:

Students have the opportunity to acquire a sense of independence and responsibility and the opportunity to apply decision-making skills.

Many of the above are probably true; we did not experience them.

13. What do you think are the greatest weaknesses of the program?

Other:

NO COMMENTS

14. What other comments or recommendations about the program would you like to make?

Overall, an excellent opportunity for those who do not wish to obtain a college education.

Better communication is needed between school representatives and participating organization.

All we did was to conduct a series of short tours - hardly an "Exploring Careers" experience.

I think the students "use" the program too much, some seem to use it to get away from the school. I think they should be given a maximum of say 10 sites, to visit and learn more about the site before the visit.

A good eye opener for adults and students both.

COMMUNITY SURVEY

ROCKY FORD

1. Which of the following services do you (or others at your site) provide for the students and how important do you feel that is for students?

Other:

(NO COMMENTS)

2. What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom:

Other:

(NO COMMENTS)

3. No comments

4. No comments

5. How did you first become involved with the program?

Other:

Started program with coordinator.
Jim Hamm Coordinator

6. No comments

7. In what ways (if any) have the employees at your site benefited?

Other:

See my shells was educational.
Gave them recognizition - respect

8. No comments

9. What do you think are the greatest strengths of the program?

Other:
Brings the students out of their shells
Students were accepted as individuals and were treated with respect.
Students need on the job training instead of so much play.
Contact problems probably never thought about before.

10. What do you think are the greatest weaknesses of the program?

Other:
Some principals and teachers won't encourage students to learn to tak a job responsibility.
Participation not sufficient in some schools.

11. What other comments or recommendations would like to make?

That program continues as it has, I can see a big improvement in communication with youth, they are learning what the "real world is like". (Chief of Police)

I feel that the program has been good for all involved.

The program needs more time in the school district to work better.

I think student should understand why auto insurance is so costly at their age.

This program most definitely should continue.

We feel this program was very much needed and has really benefited not only the children but a lot of businesses. It's too bad there are a few who can only think of sports and themselves and not about our younger ones benefits.

Hope it doesn't all go down the drain - feel it is an important area of education.

COMMUNITY SURVEY

EAGLE

1. Which of the following services do you (or others at your site) provide for the students and how important do you feel that is for students?
Other:
Attempt to relate academic studies to practical skills.

We provided outdoor education lessons in various fields for grades K-8. I feel it is very important since the district has no outdoor education program of its own.

2. What do you feel students are able to learn on job sites that they could not learn as well in a regular school classroom:

Other:

Experiences they will be able to apply to future leisure activities.

5. How did you first become involved with the program?

Other:

Helped bring it to school district originally.

I was assigned by my supervisor to visit schools for Benjamin Franklin Stamp Club.

Part of my job.

Worked some with Jackie Pyka in O.E. Pilot Program MMS 1975-76.

7. In what ways have the employees at your site benefited?
Other:

Nothing apparent.

9. What do you think are the greatest strengths of the program?
Other:
Students see skills put to use, earn income.

Day to day interaction.

10. What do you think are the greatest weaknesses of the program?
Other:

I don't see any problems with it.

Most of our work has been with elementary students - also needed in Junior and Senior High.

Transportation for regular visits to VNC difficult. Most often I visited schools.

Would like contact with older students.

Group size - better when visiting hospital to be less than 10 or 11.

Treated as an extra program by most school personnel. Should be other way around.

11. What other comments or recommendations would you like to make?

I've enjoyed the contact with the students enormously.

11. continued

Each year, the first grade comes to the post office to mail valentines and tour the post office. Also I visit 4, 5, 6, grades to interest them in the Benjamin Franklin Stamp Club. I would like to have visits from high school classes - history, business, or any with an interested teacher.

Excellent program and should be continued.

The district should try to budget a full-time outdoor education specialist to set up and conduct a district-wide program. It is appalling how little our students know of the out of doors when they live in such a perfect environment for learning it.

Extend to high school and junior high i.e. police information.

That some type of booklet be published to allow employers or business to see how many people and students are involved. Just to give an idea of its impact to communities.

We would like to try and reach more groups of students at the schools to educate them to be more aware of their dental health.

APPENDIX M

ANALYSIS OF RURAL/URBAN AND INFUSION/ALTERNATIVE PROGRAMS

PRE
TOTAL

9th Grade

Wheatridge and Alameda -- Total -- 9th Grade

	Wheatridge	Alameda	.05 level 2.46
Sample Mean	105.47	110	
Standard Deviation	6.28	11.96	
Square of Standard Deviation	39.44	143.04	
N =	15	15	
F = .28 NSD			

Wheatridge and Holyoke -- Total -- 9th Grade

	Wheatridge	Holyoke
Sample Mean	105.47	110
Standard Deviation	6.28	7.40
Square of Standard Deviation	39.44	54.76
N =	15	15
F = .72 NSD		

Wheatridge and Battle Mountain -- Total -- 9th Grade

	Wheatridge	Battle Mountain
Sample Mean	105.47	102.2
Standard Deviation	6.28	8.01
Square of Standard Deviation	39.44	64.16
N =	15	15
F = .62 NSD		

Wheatridge and Rocky Ford -- Total -- 9th Grade

	Wheatridge	Rocky Ford
Sample Mean	105.47	103.87
Standard Deviation	6.28	12.09
Square of Standard Deviation	39.44	146.17
N =	15	15
F = .27 NSD		

POST
TOTAL

9th Grade

Wheatridge and Alameda -- Total -- 9th Grade

	Wheatridge	Alameda	.05 level 2.46
Sample Mean	103.73	103.53	
Standard Deviation	13.67	11.75	
Square of Standard Deviation	186.87	138.06	
N =	15	15	

F = 1.35 NSD

Wheatridge and Holyoke -- Total -- 9th Grade

	Wheatridge	Holyoke
Sample Mean	103.73	105.27
Standard Deviation	13.67	7.06
Square of Standard Deviation	186.87	49.84
N =	15	15

F = 3.74 exceeds 3.46 critical value .05 level

Wheatridge and Battle Mountain -- Total -- 9th Grade

	Wheatridge	Battle Mountain
Sample Mean	103.73	98.73
Standard Deviation	13.67	7.92
Square of Standard Deviation	187.87	62.73
N =	15	15

F = 2.979 exceeds 2.46 critical value .05 level

Wheatridge and Rocky Ford -- Total -- 9th Grade

	Wheatridge	Rocky Ford
Sample Mean	103.73	103.53
Standard Deviation	13.67	9.90
Square of Standard Deviation	186.87	98.01
N =	15	15

F = 1.90 NSD

PRE
SECTION 1

9th Grade

Wheatridge and Alameda -- Section 1 -- 9th Grade -- Pre

	Wheatridge	Alameda
Sample Mean	23.13	25.33
Standard Deviation	5.49	6.95
Square of Standard Deviation	30.14	48.30
N =	15	15

F = .62 NSD

Wheatridge and Holyoke -- Section 1 -- 9th Grade -- Pre

	Wheatridge	Holyoke
Sample Mean	23.13	24.13
Standard Deviation	5.49	4.54
Square of Standard Deviation	30.14	20.61
N =	15	15

F = 1.46 NSD

Wheatridge and Battle Mountain -- Section 1 -- 9th Grade -- Pre

	Wheatridge	Battle Mountain
Sample Mean	23.13	22.07
Standard Deviation	5.49	5.19
Square of Standard Deviation	30.14	26.94
N =	15	15

F = 1.12 NSD

Wheatridge and Rocky Ford -- Section 1 -- 9th Grade -- Pre

	Wheatridge	Rocky Ford
Sample Mean	23.13	26.2
Standard Deviation	5.49	6.47
Square of Standard Deviation	30.14	41.86
N =	15	15

F = .72 NSD

POST
SECTION 1

9th Grade

Wheatridge and Alameda -- Section 1 -- 9th Grade -- Post

	Wheatridge	Alameda
Sample Mean	24.13	22.13
Standard Deviation	8.84	6.16
Square of Standard Deviation	78.15	97.95
N =	15	15

F = .80 NSD

Wheatridge and Holyoke -- Section 1 -- 9th Grade -- Post

	Wheatridge	Holyoke
Sample Mean	24.13	20.8
Standard Deviation	8.84	3.51
Square of Standard Deviation	78.15	12.32
N =	15	15

F = 6.34 exceeds 2.46 critical value .05 level

Wheatridge and Battle Mountain -- Section 1 -- 9th Grade -- Post

	Wheatridge	Battle Mountain
Sample Mean	24.13	18.6
Standard Deviation	8.84	3.11
Square of Standard Deviation	78.15	9.67
N =	15	15

F = 8.08 exceeds 2.46 critical value .05 level

Wheatridge and Rocky Ford -- Section 1 -- 9th Grade -- Post

	Wheatridge	Rocky Ford
Sample Mean	24.13	21.73
Standard Deviation	8.84	4.01
Square of Standard Deviation	78.15	16.08
N =	15	15

F = 4.86 exceeds 2.46 critical value .05 level

PRE
SECTION 2

9th Grade

Wheatridge and Alamosa -- Section 2 -- 9th Grade -- Pre

	Wheatridge	Alameda
Sample Mean	37	42.07
Standard Deviation	9.96	4.56
Square of Standard Deviation	99.20	20.79
N =	15	15

F = 4.77 exceeds 2.46 critical value .05 level

Wheatridge and Holyoke -- Section 2 -- 9th Grade -- Pre

	Wheatridge	Holyoke
Sample Mean	37	41.60
Standard Deviation	9.96	3.87
Square of Standard Deviation	99.20	14.98
N =	15	15

F = 6.62 exceeds 2.46 critical value .05 level

Wheatridge and Battle Mountain -- Section 2 -- 9th Grade -- Pre

	Wheatridge	Battle Mountain
Sample Mean	37	39.4
Standard Deviation	9.96	4.39
Square of Standard Deviation	99.20	19.27
N =	15	15

F = 5.15 exceeds 2.46 critical value .05 level

Wheatridge and Rocky Ford -- Section 2 -- 9th Grade -- Pre

	Wheatridge	Rocky Ford
Sample Mean	37.	38.4
Standard Deviation	9.96	6.87
Square of Standard Deviation	99.20	47.20
N =	15	15

F = 2.10 NSD

POST
SECTION 2

9th Grade

Wheatridge and Alameda -- Section 2 -- 9th Grade -- Post

	Wheatridge	Alameda
Sample Mean	35.47	40.
Standard Deviation	7.06	6.41
Square of Standard Deviation	49.84	41.09
N =	15	15

F = 1.21 NSD

Wheatridge and Holyoke -- Section 2 -- 9th Grade -- Post

	Wheatridge	Holyoke
Sample Mean	35.47	40.53
Standard Deviation	7.06	4.34
Square of Standard Deviation	49.84	18.84
N =	15	15

F = 2.65 exceeds 2.46 critical value .05 level

Wheatridge and Battle Mountain -- Section 2 -- 9th Grade -- Post

	Wheatridge	Battle Mountain
Sample Mean	35.47	38.53
Standard Deviation	7.06	1.82
Square of Standard Deviation	49.84	23.23
N =	15	15

F = 2.15 NSD

Wheatridge and Rocky Ford -- Section 2 -- 9th Grade -- Post

	Wheatridge	Rocky Ford
Sample Mean	35.47	39.53
Standard Deviation	7.06	5.55
Square of Standard Deviation	49.84	30.80
N =	15	15

F = 1.62 NSD

PRE
SECTION 3

9th Grade

Wheatridge and Alameda -- Section 3 -- 9th Grade -- Pre

	Wheatridge	Alameda
Sample Mean	42.33	43.13
Standard Deviation	3.72	3.98
Square of Standard Deviation	13.84	15.84
N =	15	15

F = .87 NSD

Wheatridge and Holyoke -- Section 3 -- 9th Grade -- Pre

	Wheatridge	Holyoke
Sample Mean	42.33	44.27
Standard Deviation	3.72	3.47
Square of Standard Deviation	13.84	12.04
N =	15	15

F = 1.15 NSD

Wheatridge and Battle Mountain -- Section 3 -- 9th Grade -- Pre

	Wheatridge	Battle Mountain
Sample Mean	42.33	40.27
Standard Deviation	3.72	5.61
Square of Standard Deviation	13.84	31.47
N =	15	15

F = .44 NSD

Wheatridge and Rocky Ford -- Section 3 -- 9th Grade -- Pre

	Wheatridge	Rocky Ford
Sample Mean	42.33	38.4
Standard Deviation	3.72	6.87
Square of Standard Deviation	13.84	47.20
N =	15	15

F = .29 NSD

POST
SECTION 3

9th Grade

Wheatridge and Alameda -- Section 3 -- 9th Grade -- Post

	Wheatridge	Alameda
Sample Mean	44.13	42.73
Standard Deviation	3.04	3.83
Square of Standard Deviation	9.24	14.67
N =	15	15

F = .63 NSD

Wheatridge and Holyoke -- Section 3 -- 9th Grade -- Post

	Wheatridge	Holyoke
Sample Mean	44.13	45.06
Standard Deviation	3.04	4.30
Square of Standard Deviation	9.24	18.49
N =	15	15

F = .50 NSD

Wheatridge and Battle Mountain -- Section 3 -- 9th Grade -- Post

	Wheatridge	Battle Mountain
Sample Mean	44.13	41.93
Standard Deviation	3.04	6.46
Square of Standard Deviation	9.24	41.73
N =	15	15

F = .22 NSD

Wheatridge and Rocky Ford -- Section 3 -- 9th Grade -- Post

	Wheatridge	Rocky Ford
Sample Mean	44.13	41.07
Standard Deviation	3.04	5.16
Square of Standard Deviation	9.24	26.63
N =	15	15

F = .35 NSD